PMI/ARM3

ANNUAL PERFORMANCE REPORT

OCTOBER 1, 2013 – SEPTEMBER 30, 2014

FISCAL YEAR 2014, PROGRAM YEAR 3

DECEMBER 2014

PMI/ARM3

Accelerating the Reduction of Malaria Morbidity and Mortality Program

Annual Performance Report:
October 1, 2013 to September 30, 2014
Fiscal Year 2014
Program Year 3

Submitted to*:*
Michelle Kouletio, Agreement Officer's Representative (AOR), USAID/Benin
Carrie Rasmussen, Family Health Team Leader, USAID/Benin

Cover photo: The Deputy Coordinator of the NMCP poses with school children during one of the World Malaria Day caravan stops on April 24, 2014 *Credit: ARM3-MCDI*

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Table of Acronyms

ACPB	Association des Cliniques Privées du Bénin
ACT	Artemisinin Combination Therapy
AIRS	Abt's Indoor Residual Spraying Program
AMCES	Association des Œuvres Médicales Privées Confessionnelles et Sociales
ANC	Antenatal Clinic
ARM3	Accelerating the Reduction of Malaria Morbidity and Mortality Program
BCC	Behavioral Change Communication
CAME	Centrale d'Achat des Médicaments Essentiels (Central Medical Stores)
CDC	Centers for Disease Control and Prevention
CEBAC-STP	Coalition des Entreprises Béninoises et Associations Privées Contre le SIDA, la Tuberculose, et le Paludisme
CHD	Centre Hospitalier Départemental
CHW	Community Health Workers
COP	Chief of Party
DDS	Direction Départmentale de Santé
DHS	Demographic Health Survey
DNSP	Direction Nationale de la Santé Publique
DPMED	Direction de la Pharmacie, des Médicaments et de l'Exploration Diagnostique
DRZ	Dépôt Répartiteurs de Zone
DSME	Direction de la Santé de la Mère et de l'Enfant
ETAT	Emergency Triage, Assessment and Treatment
EUVS	End Use Verification Survey
FO	Field Office
GFATM	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GOB	Government of Benin
HF	Health Facility
HFS	Health Facility Survey
HMIS	Health Management Information System
HZ	Health Zone
HO	Home Office
ICCM	Integrated Community Case Management
INMES	Institut National Médico-Social
IPTp	Intermittent Preventive Treatment for Pregnant Women
IRS	Indoor Residual Spraying
IRSP	Institut Régional de Santé Publique
JHU-CCP	Johns Hopkins University - Center for Communication Programs
LDP	Leadership Development Program
LLIN	Long Lasting Insecticide-treated Nets
LMIS	Logistical Management Information System
LNCQ	Laboratoire National de Control de Qualité
Logisnigs	LOGIciel Systeme National d'Information et de Gestion Sanitaire
LOP	Length of Project
MCDI	Medical Care Development International
M&E	Monitoring & Evaluation
MEDISTOCK	Commodities Management Program
mHealth	Medical and public health practice supported by mobile devices, such as mobile phones, tablets and other wireless devices
MNCH	Maternal, Neonatal and Child Health
MOH	Ministry of Health
MOU	Memorandum of Understanding
MOP	Malaria Operational Plan
MSH	Management Sciences for Health
NGO	Non-Government Organization
NMCP	National Malaria Control Program

OTSS	Outreach Training Support and Supervision
PISAF	Project Intégré de Santé Familiale
PITA	Plan Intégrée de Travail Annuel
PMEP	Performance Monitoring and Evaluation Plan
PMI	President's Malaria Initiative
PMP	Performance Monitoring Plan
PNLP1	Programme National de Lutte contre le Paludisme
PPMRm	Procurement Planning and Monitoring Report for malaria
QA/QC	Quality Assurance/Quality Control
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
RFA	Request for Applications
RMIS	Routine Malaria Information System
ROBS	Réseau des ONG Béninoises de Santé
SCM	Supply Chain Management
SEE	Santé en Enterprise
SMS	Short Message Service
SNIGS	Système National d'Information et de Gestion Sanitaire
SOP	Standard Operating Procedures
SP	Sulfadoxine-Pyrimethamine
TOR	Terms of Reference
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
USAID	United Stated Agency for International Development
WHO	World Health Organization
WMD	World Malaria Day

Acknowledgements

ARM3 wishes to acknowledge its strong partnership which makes this project possible, especially the members of the ARM3 consortium (Africare, John Hopkins University – Center for Communications Program and Management Sciences for Health) and the Government of Benin duly represented by its National Malaria Control Program. We also recognize the contributions of our private sector partners (*Coalition des Entreprises Béninoises et Associations Privées Contre le SIDA, la Tuberculose, et le Paludisme*, CEBAC-STP ; *Association des Œuvres Médicales Privées Confessionnelles et Sociales*, AMCES ; *Réseau des ONG Béninoise de Santé*, ROBS ; and *Association des Cliniques Privées du Bénin*, ACPB). Most importantly, MCDI acknowledges the constructive guidance and financial support of USAID Benin that makes the implementation of the ARM3 Project possible.

Executive Summary

Accelerating the Reduction of Malaria Morbidity and Mortality Program (ARM3) in Benin is funded by the United States Agency for International Development (USAID). The project partners, Medical Care Development International (MCDI) and Management Sciences for Health (MSH) are working in partnership with the Benin Ministry of Health's (MOH) National Malaria Control Program (NMCP) to implement the five year (October 1, 2011 to September 30, 2016) ARM3 malaria control program. Two of the original consortium partners, Africare and Johns Hopkins University-Center for Communication Programs (JHU-CCP), who contributed to the ARM3 consortium during the first 3 years, will no longer assist in the implementation of ARM3 in year 4. The project, launched on October 1, 2011, is currently in its fourth year.

This Annual Report provides information on the accomplishments of the ARM3 project in year 3 (October 1, 2013 through September 30, 2014). During the year, ARM3 achieved many successes and managed to reach many of its program targets for year 3 which are summarized below (also in ARM3's Performance Monitoring Plan (PMP) in Annex 1):

*ARM3 achieved the following performance for **Result 1** (Malaria Prevention) during year 3:*

- During the last quarter of the year, 43% of women attending ante-natal clinics received two doses of Intermittent Preventive Treatment for Pregnant Women (IPTp) under direct observation of a health worker compared with the baseline of 28.1%;
- 1,913 health workers (1,214 community level health workers) received refresher training in IPTp administration during ante-natal visits, and in interpersonal communication (IPC), including 543 public sector workers and 156 private health workers.
- A total of 55,000 LLINs were distributed and more than 300,000 people were protected by Long-lasting Insecticide-treated Nets (LLINs) as a result of the Phase 2 LLIN distribution conducted in year 3. A major activity in 2014 was the preparation of the 2014 National LLIN mass distribution campaign organized by the NMCP with the financial assistance from the Global Fund, and ARM3's technical support.

*ARM3 achieved the following performance for **Result 2** (malaria diagnostics and treatment) during year 3:*

- 84% of health facilities (HFs), included in the latest round of Outreach Training Support and Supervision (OTSS), were capable of performing biological diagnosis of malaria; 84% of OTSS health facilities had no stock-outs in diagnostics commodities; 100% of OTSS health facilities had a functional microscope; and 78% of patients (all ages) tested positive received an anti-malarial (ACT) during latest EUVS.
- Based on RMIS data available from June 2014, 84% of suspected malaria cases (all ages) were tested by either microscopy or RDT testing (compared with the baseline of 36.7%); for children under 5 the percentage jumps to 85.6%.
- There has been a significant decrease in the number of negatively tested cases treated with ACTs (1.1% during latest EUV in Atlantique Littoral) and a good compliance in treating patients testing positive for malaria with ACTs (82.7% in Mono/Couffo, 80.9% in Borgou Alibori and 77.7% in Atlantique/Littoral based on regional EUVs results).
- As part of the amended year2 work plan, ARM3 began implementation of iCCM activities in 5 northern health zones. Over the course of year 3 more than 1,200 community health workers (CHW) were either trained/re-trained in the management of malaria, pneumonia and diarrhea. Innovations to the upgraded training included training CHWs on the administration and use of RDTs and on the revised protocol for treating pneumonia with amoxicillin in lieu of cotrimoxazole. With ARM3's support and in collaboration with HFs and communities, 25,501 children <5 have been suspected for malaria; among

them, 18,162 (71.2%) have been tested with an RDT and 16, 119 (63.4%) were RDT positive. A total of 21,437 (84.1%) suspected and confirmed cases were treated[1].

*ARM3 achieved the following performance for **Result 3** (NMCP strengthening) during year 3:*

- RMIS data reporting has increased from 48.5% to 85% in the public sector and from 21% to 73% in the private sector and significant progress was made on data quality through the introduction of quarterly validation workshops and Routine Data Quality Assessment Tools (RDQA).
- ARM3 successfully organized the first quantification exercise for malaria commodities forecasting for 2014 and 2015 based on consumption data.
- 100% of DRZs (34/34) reported quarterly in Q3 and Q4 on the Logistics Management Information System (LMIS); 85% of HFs provided LMIS reports to their DRZs;
- According to quarterly RMIS data collected in year 3, the behavior of health facilities reporting no stock-outs of ACTs was: 52% for quarter 1; 52,4% for quarter 2; 60,1% for quarter 3; and 61% quarter 4. The average for the year was 56.37%. The availability of ACTs was affected due to administrative delays and lack of timely quality control. ARM3, however, worked with the NMCP to resolve the delays by the end of year 3.

The year annual report would not be complete if it did not make any mention of one of the important events that occurred in year 3, i.e., the de-scoping of ARM3[2]. As a consequence of this event, ARM3 worked closely with USAID to address constraints that impacted the timely approval of ARM3's budget during the transition period, as well as other challenges, including the reallocation of roles and responsibilities among consortium members and the NMCP.

[1] The national tool used to monitor community level activities does not enable to determine the % of confirmed malaria cases correctly treated with an RDT.

[2] Also referred to as 'partial termination' in official USAID correspondence with MCDI

Result 1: Implementation of Malaria Prevention Interventions in Support of the National Malaria Strategy Improved

Sub-Result 1.1: IPTp Uptake Increased

KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

- ***43% of women attending ante-natal care visits received two doses of IPTp under direct observation of a health worker,*** *Source: RMIS June 2014*
- ***1,913 health workers received refresher training in IPTp administration during ante-natal visits, including 543 public sector workers, 156 private health workers, and 1,214 community level health workers,*** *Source: ARM3 Program Reports*

PREVENTION ACTIVITIES

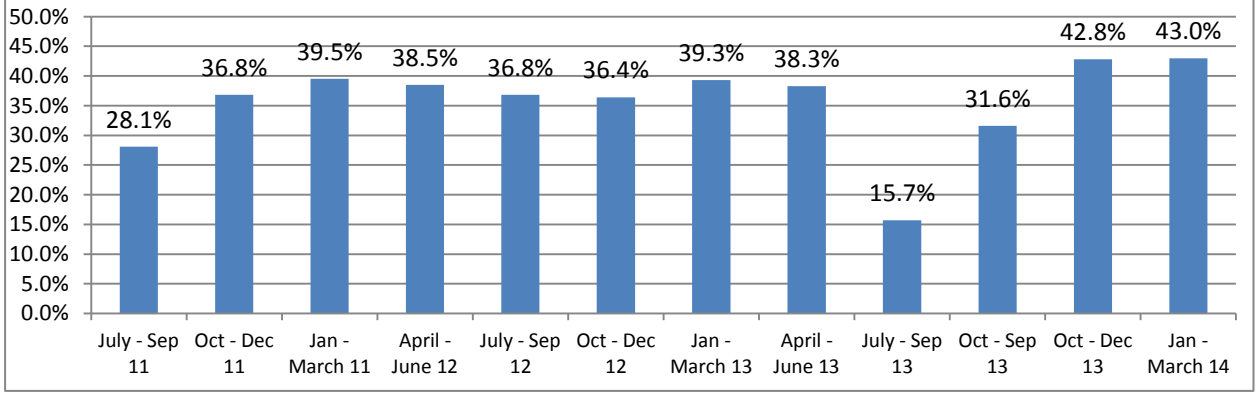
Over the course of year 3, ARM3 trained 1,913 health workers in Intermittent Preventive Treatment in Pregnancy (IPTp), including 543 professionals (through renewed MOUs with 25 HZs and 6 DDSs) and 1,214 community level health workers (CHWs) in two HZs in northern Benin.

A health agent directly observes a pregnant woman taking a dose of SP at her ANC clinic. *Credit: ARM3*

ARM3 also trained 156 private sector health workers from ROBS, AMCES and ACPB on IPTp and supported private sector health facilities in the implementation of Malaria in Pregnancy activities, including the uptake of IPTp, the distribution of LLINs and the timely reporting of results through the Routine Malaria Information System (RMIS).

Driven by the recommendations of an IPTp Barriers Study, ARM3 also developed and implemented trainings on Interpersonal Communication (IPC) targeting health workers' attitudes and behaviors towards their clients and ensured that personnel at ANC facilities were adequately trained on IPTp prevention protocols. These efforts have led to an increase in the utilization of IPTp by pregnant women; since project startup the percentage of women who attended ante-natal centers and completed IPTp2 (second dose) has increased from 28.1% to 43% (based on RMIS data). BCC activities implemented in year 3, which were aligned with ARM3's BCC Strategy for the NMCP also contributed to behavioral change targets, such as increased IPTp uptake pregnant women.

Graph 1: Percentage of Women Completing IPTp2 During ANC Visits Since the Begining of ARM3



SUCCESS STORY: ARM3 CHWs Improve the Lives of Women in Benin through Malaria Prevention Activities

Following Ms. Sabi's positive experience, more women in Gbanyambarou are following the recommendations of CHWs. In fact, women in the village have established a

Ms. Sabi Adama, a 35 year old housewife with six children living in Gbanyambarou, is grateful to the efforts of the local CHWs who have helped her understand the importance of ANC visits during pregnancies. During her first four pregnancies, which all involved complications, she never went to a HF and gave birth at home. She was often very sick and suffered from headaches and blurred vision, which prevented her from taking care of her family. She almost died of severe bleeding during her third pregnancy. Ms. Sabi finally decided to follow the advice of CHWs, and regularly visited HFs during her last pregnancy. During the course of her visits, she received two doses of SP as recommended and did not suffer from any complications. Ms. Sabi also followed the advice of ANC attendants and breastfed her youngest daughter exclusively for six months after birth.

Ms. Sabi Adama and her daughter are healthier as a result of CHW efforts in Gbanyambarou the *Credit: ARM3*

Women in the village of Gbanyambarou have established a fund for the transport and care of sick children with serious complications to health centers. This fund, which collects money on a weekly basis and is managed by a local women's committee, has been successful in increasing referrals for serious complications to health centers.

"I am so happy because ever since I started following the advice of the CHWs, my children are healthy and I am healthy as well! I am going to advise all the women in Gbanyambarou to follow my example!"
– Ms. Sabi Adama

Sub-Result 1.2: Supply and Use of LLINs Increased

KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

- ***55,000 LLINs were distributed and more than 300,000 people were protected by Long-lasting Insecticide-treated Nets (LLINs) as a result of the Phase 2 LLIN distribution***
- ***80% of Revenue from the Sale of LLINs Collected and Deposited into the CEBAC/ARM3 Joint Bank Account***

  Source: CEBAC-STP and ARM3 program Reports

LLIN PHASE 2 DISTRIBUTION

As part of the follow-up of the 44,000 LLINs distributed in Phase 1, ARM3 implemented a cross-sectional study to: (1) assess the number people who had at least one LLIN distributed by ARM3; (2) evaluate if the family had used the net the night before; and (3) assess the condition of the mosquito nets. Two hundred sixty-four (264) employees were chosen randomly from a list of companies who had participated in the Phase 1 distribution and had received one or more LLINs during the campaign. Eighty five (85.5%) (224/262) of respondents confirmed use of an LLIN since the start of the campaign.

In year 3, the Phase 2 of the LLIN distribution came to a close with approximately 55,000 LLINs distributed to 21 private sector companies affiliated with the *Coalition des Entreprises Béninoises et Associations Privées Contre le SIDA, la Tuberculose, et le Paludisme (CEBAC-STP)* benefiting 300,000 employees and their families (around 1,000 LLINs were used during training events and provided to USAID for distribution to women's groups and other organizations). Once distribution campaign was completed, ARM3 worked with CEBAC-STP to collect the revenue from the subsidized distribution through CEBAC-STP´s regional offices. As of September 30, 2014, the revenue collected was $82,396 and the remaining balance in the joint ARM3/CEBAC-STP account was $65,000. The revenue collected has already been accounted into ARM3's budget and approved by USAID. Around 80% of the revenue collected has been used by ARM3 to support private sector organizations, including CEBAC, AMCES, ROBS, to: (1) fund the distribution of the LLINs; (2) implement malaria-related promotion and education activities; and (3) conduct trainings for private sector health providers on diagnosis, malaria case management, and malaria information systems.

Table 1: Summary of Results from Phase 1 and 2 LLIN Distribution and Revenue

Campaigns	LLINs Distributed Enterprises	LLINs Sold to Employees	Revenue Collected from Sale of LLINs
PHASE 1	**44,000** (27 private sector companies reaching 110,000 people)	**44,000**	**$85,074**
PHASE 2	**55,000** (21 private sector companies reaching 300,000 people)	**54,366**	**$82,396**
TOTAL	**100,000** (1,000 LLINs were given to USAID for distribution to women's groups and other organizations)	**98,366**	**$167,472**

SUCCESS STORY: ARM3 ENCOURAGES PUBLIC-PRIVATE PARTNERSHIPS IN THE FIGHT AGAINST MALARIA

Lessons learned from the second phase of the LLIN distribution showed that companies with robust Corporate Social Responsibility (CSR) mandates were more successful in their distribution of nets and had higher net utilization rates among their employees. Based on these findings, ARM3 developed an approach aimed at encouraging best performing companies/enterprises (or "Champions") within the CEBAC-STP community of private sector enterprises and companies, to take on a leadership role and influence other CEBAC partners in malaria prevention campaigns, including the distribution of LLINs. To promote and share their private-sector experience with the LLIN distribution campaigns, ARM3, the NMCP and CEBAC-STP participated in a conference sponsored by Roll Back Malaria (RBM) and *Santé en Entreprise* (SEE) titled *"Effective and sustainable partnerships to strengthen the engagement of the private sector in the fight against malaria in Francophone Africa*". The conference focused on the role of private sector investment in the prevention and treatment of malaria in Africa by sharing lessons learned and best practices from ongoing projects, including those of ARM3, and experiences of business leaders around the world.

Mr. Christophe Tozo, President of CEBAC-STP, gives the opening remarks at the joint SEE/CEBAC meeting in Cotonou on June 3
Credit: CEBAC-STP and SEE

Following this meeting in Paris, representatives from sixteen French speaking countries joined the NMCP and private enterprises for a regional workshop in Cotonou during which, they developed a set of key indicators for local businesses interested in the private sector's role in the fight against malaria.

Mr. Erick Maville, the director of SEE, cited ARM3 and CEBAC-STP's collaboration in Benin as a prime example of the type of private-sector collaboration being promoted in the fight against malaria. ARM3 and CEBAC-STP took the opportunity to further share their experiences in an effort to inspire initiatives in other countries.

Result 2: Malaria Diagnosis and Treatment Activities in Support of the National Malaria Strategy Improved

Sub-Result 2.1: Diagnostic Capacity and Use of Testing Improved

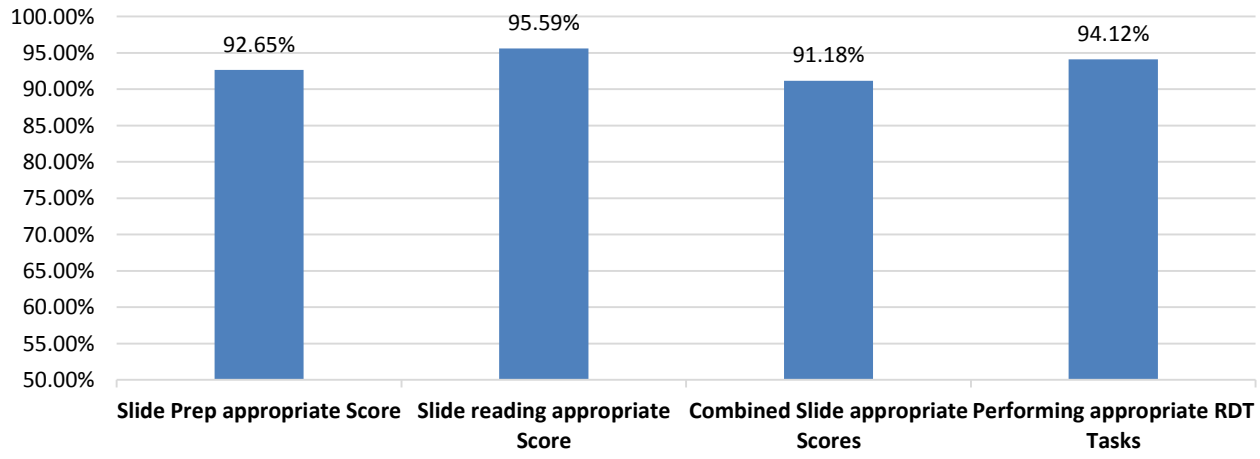
KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

- ***84% of health facilities (57/68) included in the OTSS scheme were capable of performing biological diagnosis of malaria (microscopy or RDT)***
- ***100% % of OTSS health facilities had personnel trained in diagnostics (68 out of 68) and 84% experienced no stock-out in diagnostics commodities (57/68)***
- ***100% of OTSS health facilities had a functional microscope (non-RDT facilities only) (68/68)***
- ***The percentage of people tested with RDTs and microscopy increased from 78.8% in the first quarter of year 3 to 84% by the end of year 3 (363,830/433,160),*** *Source: ARM3 Reports*

ACTIVITIES IN SUPPORT OF DIAGNOSIS

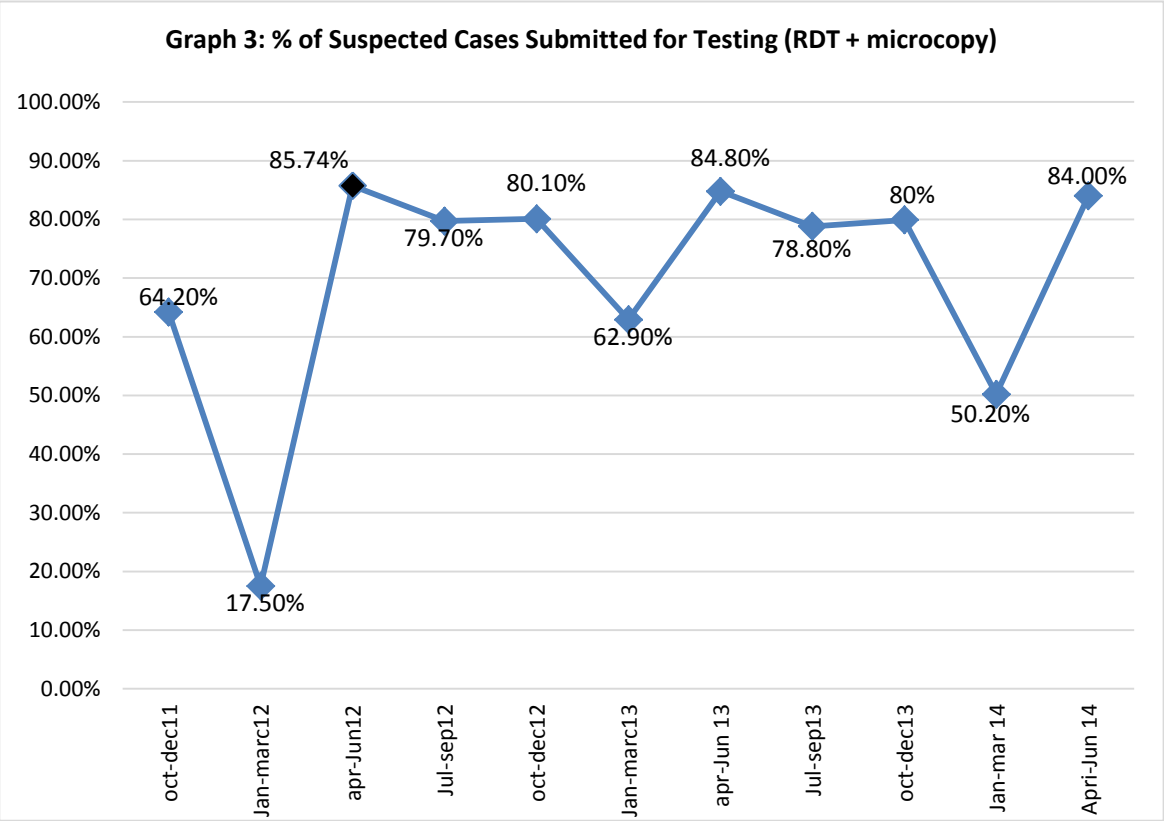
As part of its decentralization, OTSS was incorporated in the integrated supervisions funded through MOUs signed with the 34 HZs and 6 DDS. Of the 118 health facilities participating in OTSS in year 2, only 63 requested funding for OTSS Round 13 supervision due to delays in funding requests and limitations related to the end date of MOUs (June 2014). For the integrated supervisions, OTSS supervisors worked jointly with the EEZ teams. A total of 70 health facilities received OTSS visits and 68 out 70 provided completed reports by the end of the reporting period. Results were as follows: (1) 100% of HFs with personnel trained in diagnostics (68/68); (2) 84% of HFs w/ no stock out in diagnostics commodities (57/68); and (3) 100% of HFs with a functional microscope (non-RDT facilities only) (68/68).

Graph 2: % of Health Facilities Performing Malaria Microscopy in Compliance with Guidelines



In year 3, ARM3 provided training and follow-up to 2,546 health workers in malaria diagnosis [rapid diagnostic tests (RDTs) or microscopy], including 1,121 health workers (through MOUs with 34 HZs), 28 microscopists, 27 OTSS supervisors, and 1,214 CHWs at the community level in five HZs in northern Benin (under iCCM activities). ARM3 continued to incorporate OTSS methodology into the integrated supervisory activities of HZs and ARM3-targeted departments to strengthen clinical case management of malaria. The

Malaria Laboratory Diagnostic SOPs developed by the NMCP with ARM3's support were approved by the MOH and disseminated to 115 private and public sector health facilities at national level. These SOPs are an important contribution to the standardization of the procedures and practices of laboratory staff in the diagnosis of malaria in public and private sector health facilities.



Sub-Result 2.2: Case Management of Uncomplicated and Severe Malaria Improved

KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

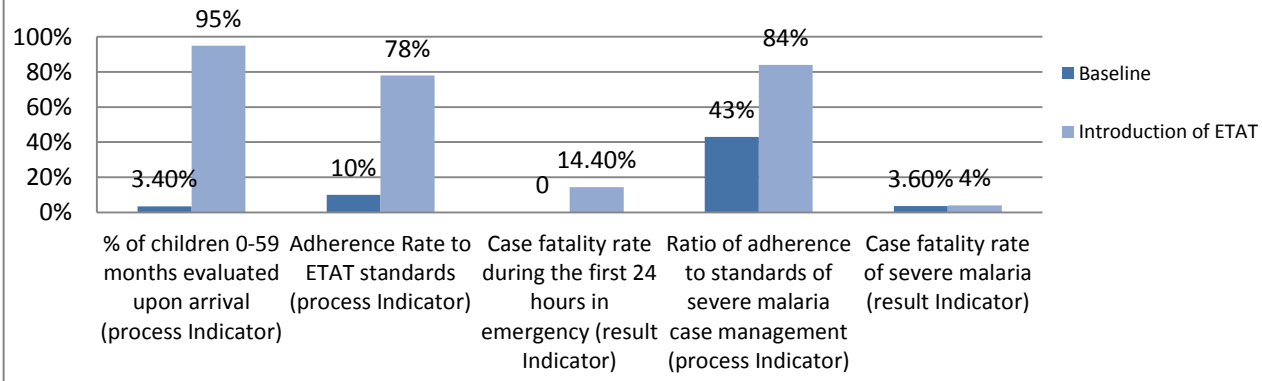
- ***1,121 public sand 156 private sector health workers were (re)trained in case management with artemisinin-based combination therapy (ACTs),*** *Health Zone Training Reports*
- ***77.7% % of patients (all ages) who tested positive for malaria (via microscopy or RDT) received an effective anti-malarial (ACT) during latest EUV in Atlantique/Littoral, July 2014***
- ***Approximately 561 HFs received supervision in 27 HZs under MOUs***

EMERGENCY TRIAGE, ASSESSMENT, AND TREATMENT (ETAT) APPROACH

During year 3, ARM3 trained 2,610 health workers on case management of uncomplicated malaria, including 1,121 public sector health workers (through MOUs with 34 HZs), 156 private sector health workers, 1,214 community-level workers, and 20 health workers on the Collaborative Approach (CA). ARM3 also trained 99 health workers on case management of severe malaria using the Emergency Triage, Assessment and Treatment (ETAT) approach and monitored ETAT indicators for severe malaria in children under 5 in 25 hospitals participating in ETAT (in two Phases).

Twelve (12) of these hospitals (Phase I) started on July 1, 2013 and an additional 13 hospitals (Phase II) began implementation on April 1, 2014. Monthly data quality validation of the targeted indicators was conducted by ARM3, the DSME, and departmental and national NMCP personnel. After one year of ETAT implementation in the first 12 hospitals, most indicators show a positive trend compared to the baseline and are shown in the graph below. For example, the indicator for % of children under five evaluated upon arrival increased from 3.4% to 95% and the adherence rate to ETAT standards rose from 10% to 78%. More significantly, the case fatality rate of severe malaria is below the threshold of 5% after the introduction of ETAT. The case fatality rate for the first 24 hours in emergency, however, was around 14.4% and above the standard of 5%. It should be noted that this indicator includes all cases of illness for children under five received by hospitals and ARM3 interventions focus primarily on malaria case management[3].

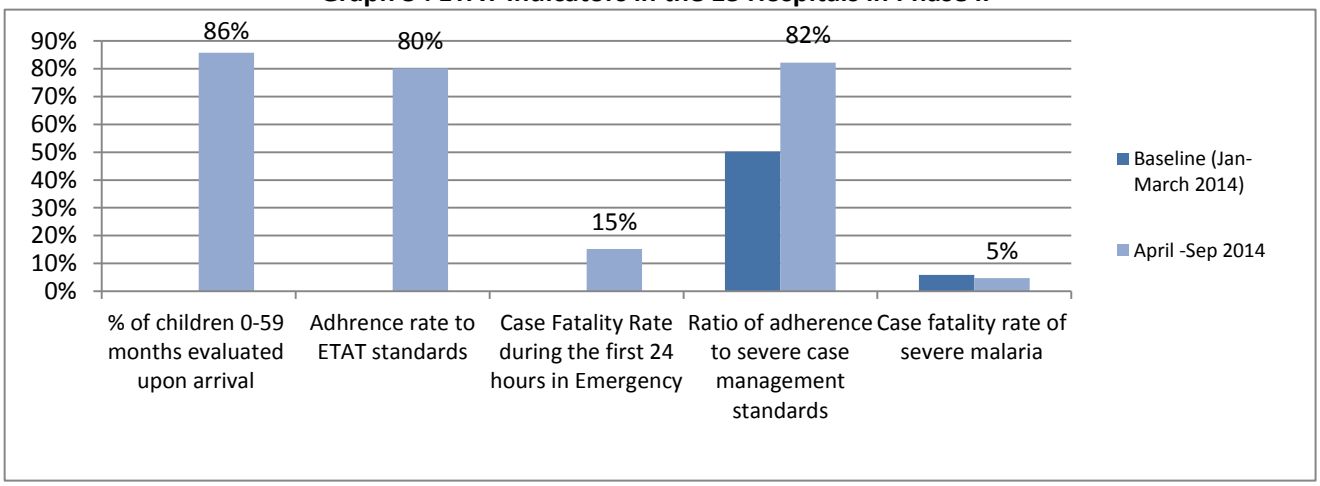
Graph 4: ETAT Indicators following 1 Year of Implementation in the 12 Hospitals in Phase I



[3] This case fatality rate can be attributed in part to repeated strikes in public health facilities, high staff turnover, lack of qualified staff and specialists, shortage of blood donors under 18, and lack of involvement of local health authorities.

Regarding the 13 hospitals included in Phase 2, after 6 months of implementation, the ratio of adherence to severe malaria guidelines rose from 50.2 to 82.2 % and the case fatality rate of severe malaria declined from 5.9 to 4.8%. ARM3 will continue conduct planned supervisions of these hospitals based on ETAT methodology.

Graph 5 : ETAT Indicators in the 13 Hospitals in Phase II



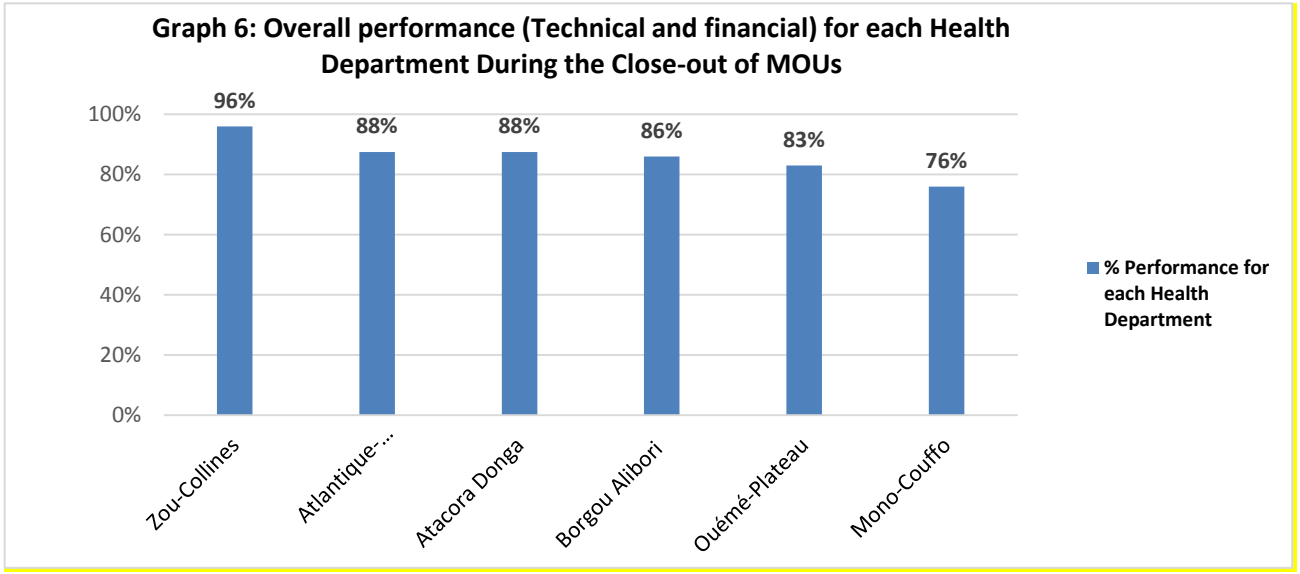
**the first 3 indicators were not calculated during baseline period.*

CAPACITY-BUILDING OF HEALTH ZONES AND CLOSE-OUT OF MOUs WITH HEALTH ZONES

During year 3, ARM3 signed new and renewed MOUs with 34 HZs and 6 DDS to conduct trainings and integrated supervision in malaria diagnosis and treatment of uncomplicated/severe malaria, and IPTp. For five of these HZs, MOUs additionally included iCCM, and for one HZ, the MOU included the Collaborative Approach (CA). The 6 MOUs with the DDS included supervisions and MOU assessments. All MOUs with HZs and DDS ended at the end of June 2014.

As part of the close-out of the MOUs, a team of ARM3 personnel and HZ representatives conducted an evaluation of the implementation of MOUs during the last quarter of year 3, which focused on both technical and financial aspects of implementation. The evaluation showed that the overall performance of all HZs increased compared to the baseline, including financial reporting, timeliness of implementation and results reporting. Seventy two (72.5%) of HZs and DDS submitted financial reports, 87.5% submitted their technical reports, and 67.5% submitted both reports. During the implementation of the MOUs, HZs and DDSs received around $854,000.

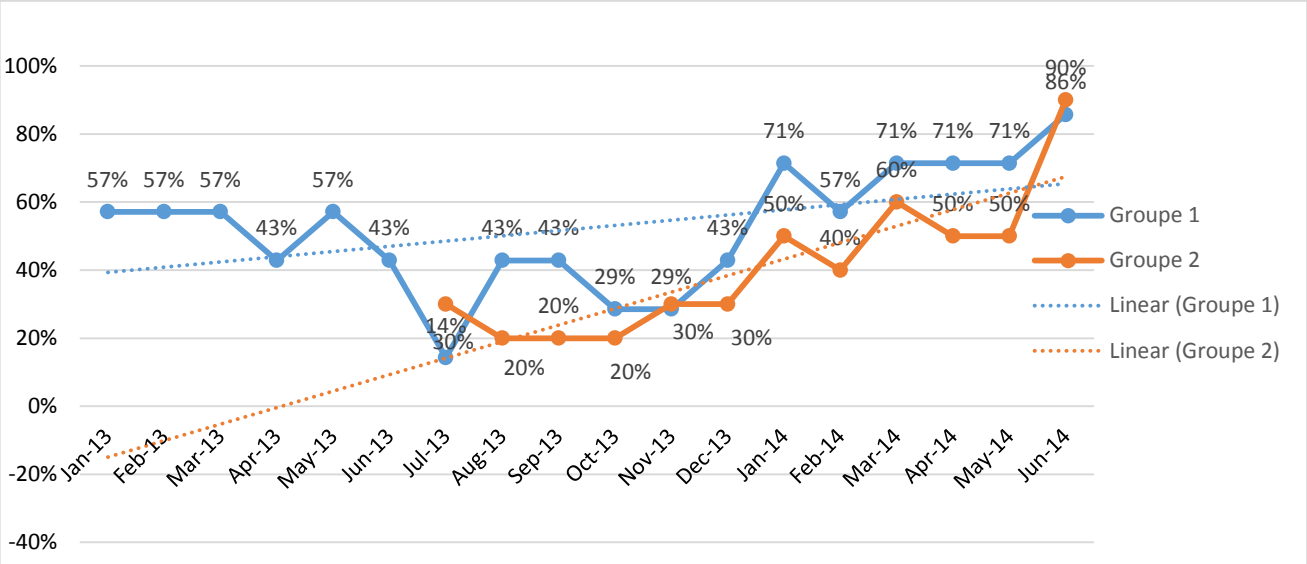
Graph 6: Overall performance (Technical and financial) for each Health Department During the Close-out of MOUs



Following the end of ARM3's financial assistance to the HZs under the MOUs at the end of June 2014, the CA was nonetheless continued in the Abomey-So-Ava HZ. With the USAID's approval, ARM3 continued to support monthly data validation visits and actively participated in the final learning sessions organized by the DDS in September 2014. These collaborative learning sessions allowed personnel to work in a team-based manner to: (1) share best practices and implement quality processes based on given norms and protocols; (2) assess the performance of the 12 CA indicators for availability of essential medicines, diagnostics, treatment, and prevention (3) identify challenges and propose solutions; and (4) develop an action plan. All health centers presented results of innovations that had been introduced at their sites to improve access and functionality for their clients. The session also focused on a review of their work plans to ensure they had been implemented.

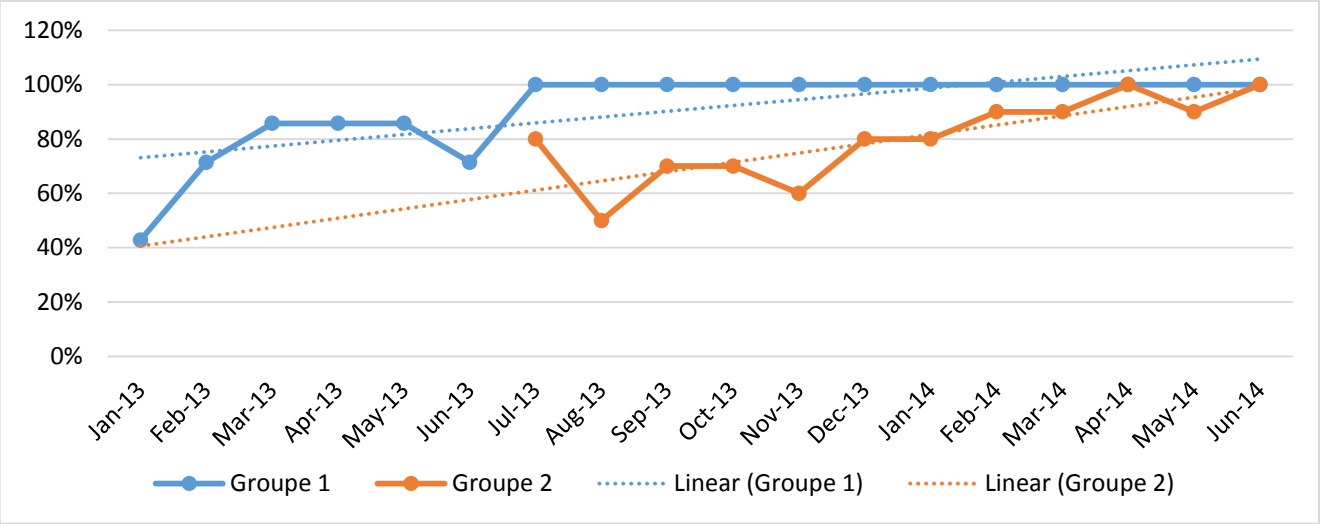
All 12 CA indicators showed positive results. Below are results of CA indicators (availability of essential medicines and malaria prevention) for two groups of health facilities (groups 1 and 2) over the course of the CA's implementation in Abomey - So-Ava HZ (January 2013 to June 2014):

Graph 7: Percentage of Health Facilities with No Stock-outs of SP



The proper supply of SP in HFs markedly improved throughout the implementation period, with a significant increase in 2014, after the national stock-out ended. The significant dip in achievements during the summer of 2013 was due to a national public-sector stock-out of SP. Both groups have shown significant improvement in the provision of IPT2 to pregnant women, despite the stock-out. Maintenance of high performance through the period – including 100% achievement by Group 1 facilities for a full year – was made possible by sending women to private pharmacies, which still carried supplies.

Graph 8: Percentage of Health Facilities who Provided IPT2 to at Least 50% of Women who Gave Birth during the Last Month



The implementation of the CA unfolded over the period of under one year, and despite the short time period, pilot sites improved their service provision and the overall indicators of their health facilities despite difficult work conditions. It is important to note, however, that this is an activity which consumes significant resources at all levels. A large proportion of resources were used to train agents and organize learning sessions. In addition, there has been a low degree of involvement and buy-in by the Ministry of Health as well as HZs and health facilities. Moreover, the process was not carried out to completion, due to changes in project priorities and the high cost of the interventions.

Sub-Result 2.3: Integrated Community Case Management (iCCM) Improved

KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

- ***iCCM Initiatives in 5 HZs in Northern Benin Implemented through five NGOs and 1,214 CHWs Retrained on iCCM and RDT use.***
- ***Implemented mHealth Pilot Project for CHWs and Health Facilities using Real-time Data Sharing ("Case-sharing") on Malaria Case Management and Drug Stocks***

Source: ARM3 Program Reports

COMMUNITY-BASED iCCM ACTIVITIES

From November 2013 to September 2014, ARM3 supported the continuation of integrated community case management (iCCM) activities in five high priority HZs in Northern Benin with the most vulnerable populations with limited access to HFs. Working jointly with the Ministry of Health (MOH) and five local NGOs, ARM3 mapped a network of CHWs and supported the MOH in developing a database for those CHWs. ARM3 also reinforced the capacity of the five local NGOs to supervise CHWs and report iCCM data and provided bridge support to ongoing USAID-funded community case management activities as USAID completed their transfer to local NGOs.

Ms. Kondo Tchati Amah, CHW in Teou Kpara *Credit: ARM3*

In collaboration with UNICEF and the Global Fund, ARM3 developed a joint implementation plan and trained/equipped over 1,200 CHWs in community case diagnosis, treatment and referral for malaria, pneumonia and diarrhea, using MOH-approved guidelines and standards. CHWs were also trained on RDT use and follow-up of pregnant women and their newborns. In collaboration with HFs and communities, 25,501 children < 5 were suspected for malaria; among them, 18,162 (71.2%) were tested with RDT and 16,119 (63.4%) were positive with RDTs. The national tool used to monitor community level activities cannot determine the percentage of confirmed malaria cases that were treated but among the suspected cases, 21,437 (84.1%) were treated with ACTs.

ARM3 also launched an iCCM mHealth initiative (based on the CommCare Platform), to support reporting of iCCM activities in two of the five iCCM HZs. This initiative allows CHWs like Ms. Kondo Tchati Amah in Teou Kpara (see photo above), to complete forms through her Android phone and submit them via a cellular network to CommCare's web-based Platform, where administrators and statisticians can remotely access and track data on patient referrals, counter-referrals, and drug stock-outs. Referrals, counter-referrals and drug stock-outs all have an alert function to immediately notify local health professionals of severe cases and potential drug shortages. Because of the work of CHWs like Ms. Kondo Tchati, more women and children under five are being referred to HFs for treatment. Ms. Kondo Tchati is proud to be contributing to these efforts.

"I am very pleased with my training on CommCare, which allows me to send important follow-up reports on pregnant women, referrals for sick children, and drug stock-outs alerts using my Android telephone in in real time. The process is very easy! What is wonderful about this application is that when I send my alerts on drug stock-out or referrals for sick children to visit a health facility, a nurse responds to me right away! I am proud to be useful to my community and they are grateful for my services. Thank you for making me such an important part of my village" – Ms. Kondo Tchati Amah

SUCCESS STORY: U.S. Ambassador and USAID/Benin Director Visited ARM3's Community-Based iCCM Health Zones in Northern Benin

In April 2014, the U.S. Ambassador, Mr. Michael Raynor, the Director of USAID Benin, Mr. Kevin Armstrong, and technical staff, conducted a site visit to assess the progress of the ARM3 project in the fight against malaria in Benin. The delegation visited the village of Papané Gah in the Tchaourou HZ where ARM3 is implementing the iCCM GSM pilot project at the community level. There, the delegation saw two CHWs using the CommCare application on their Android smartphones to refer a febrile child to a health facility and to send a drug stock-out report. The two cases demonstrated the importance of the application in expediting communication that ultimately facilitates the early diagnosis and proper treatment of malaria cases, among other iCCM and IMCI related diseases, including diarrhea, acute respiratory infections (ARIs) and malnutrition. The Ambassador and Director of USAID expressed their appreciation of the CHW's access to and mastery of new technologies that help reduce morbidity and mortality in children under the age of five. ARM3 considers this application as a sound foundation for future mHealth activities to be implemented by the new ANCRE project.

A CHW shows the positive results of a RDT to the U.S. Ambassador the USAID/Benin Director during their visit to the Borgou-Alibori *Credit: ARM3*

To better understand the drug management system in Benin, the delegation also visited the HZ drug depot (DRZ) in the Parakou-N'dali HZ. This visit demonstrated the essential role of drug depots in recordkeeping, storage, and availability of drugs in the prevention, diagnosis and treatment of malaria and other diseases. The Ambassador and the Director of USAID found the warehouse well maintained, satisfactorily stocked, and prepared for distribution of drugs. They congratulated the depot and warehouse managers, Mr. Hadda Aliou and Mr. Soule.

The delegation encouraged Mr. Delphin (representing the DDS) and the supporting ARM3 team for the success of the region in the iCCM program where they have seen a 44% decrease in infant mortality. The Director of USAID was also able to visit the ARM3 Parakou office where he met technical staff. He reiterated the commitment of USAID to continue to provide technical and financial support to health management.

Result 3: The National Health System's Capacity to Deliver and Manage Quality Malaria Treatment and Control Interventions Strengthened

Sub-Result 3.1: MOH/NMCP Capacity to Deliver and Manage Quality Malaria Treatment and Control Interventions Improved

KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

- ***Technical and financial support to the NMCP provided to design and implement its Integrated Annual Work Plan (PITA)***
  Source: ARM3 Program Reports
- ***Technical Working Groups (TWGs) Meetings held on Supply Chain Management (4), BCC (1) and Case Management (1)***
  Source: ARM3 Program Reports

CAPACITY BUILDING OF LOCAL PARTNERS

One of the major achievements of the Supply Chain Management (SCM) TWG's during year 3 was the identification of causes of stock-outs. Specifically, the TWGs addressed the quarantine of malaria commodities implemented by the LNCQ, due to lack of reagents, and proposed solutions to ensure stock availability through the quantification of stock based on supply management using the PipeLine® software.

Participants at a LOGISNIGS software training in Parakou
Credit: ARM3

The main result of the Case Management (CM) TWG was the validation of the new Malaria Case Management Policy. For the BCC TWG, the NMCP's BCC representative presented plans and preparations for the national LLIN distribution and preparations for World Malaria Day in April 2014.

In addition to participation in TWG meetings, ARM3 also provided direct technical assistance to the NMCP on BCC, M&E and case management activities through seminars, workshops and training activities.

Sub-Result 3.2: Capacity to Collect, Manage and Use Malaria Quality Treatment and Control Interventions Improved

KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

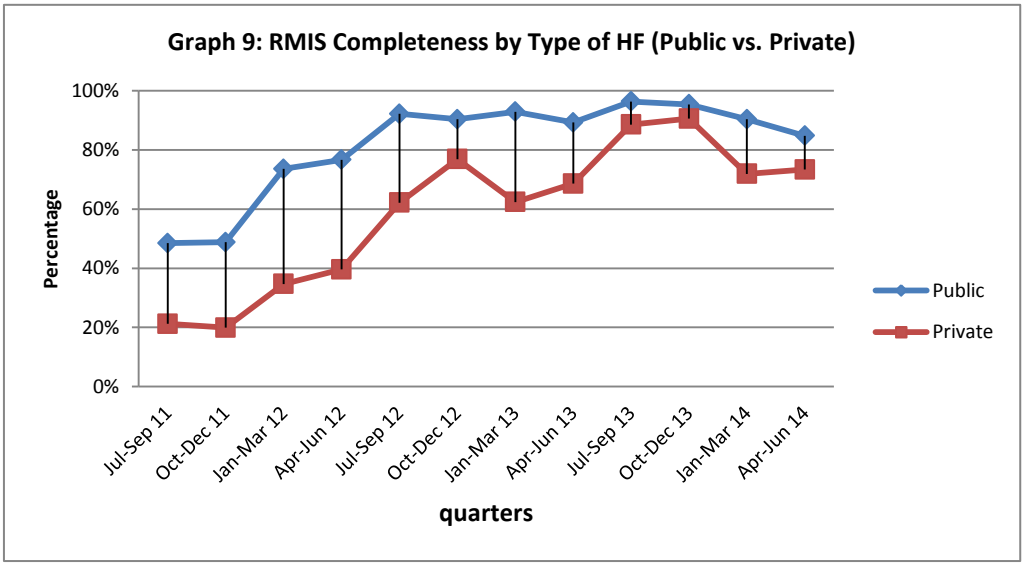
- ***83% of health facilities of RMIS health facilities reported malaria-related information on a regular and timely basis for decision making during year 3***
  Source: RMIS

- ***Two Quarterly Bulletins were produced in collaboration with the NMCP***

STRENGTENING OF HEALTH MANAGEMENT INFORMATION SYSTEMS

In year 3, ARM3's technical support to the National Malaria Control Program (NMCP), including the M&E unit and Health Management Information System (HMIS) at the national, regional and peripheral levels, continued to improve the RMIS situation in Benin. ARM3 completed the training of 137 health zone coordinators and statisticians from local to national levels on data analysis, reporting, QA/QC, and statistical software. Additionally, ARM3 conducted quarterly RMIS data validation (for data from July to December 2013), two routine data quality assessment (RDQA), and documented Performance Based Financing results.

While the rate of RMIS completeness went down during the last two quarters of year3 due to strikes by health workers, the overall RMIS data reporting and completeness continues to improve. Since 2011, RMIS data reporting has increased from 48.5% to 85% in the public sector and from 21% to 73% in the private sector. This has contributed to the availability of reliable and appropriate data for decision-making in malaria in Benin.



Note: Reduction in the RMIS reporting in the last 2 quarters is attributable to strikes.

Also in Year 3, ARM3 drafted an initial report of the Health facility survey (HFS) and submitted it to USAID and CDC for review and feedback which was subsequently incorporated into the working draft. After review there were a few residual concerns related to the composition of certain composite indicators. CDC will work with MCDI and the Mission to clear up these remaining issues at which point the team can work to finalize the report.

As a result of de-scoping, ARM3's responsibilities in the collection and validation of RMIS data were reduced.

SUCCESS STORY: ARM3 Helps Health Zones in Benin Prevent Malaria Outbreaks through Improved HMIS/RMIS Reporting

Before the onset of technical support from ARM3, the Routine Malaria Information system (RMIS) in Benin was weak. Data forms at health centers were not regularly transmitted to the health zones and health facility workers in charge of data collection/reporting were not motivated. Moreover, health zones and regional statisticians were not trained on data management software, the private sector was not involved, and databases and computers were not routinely maintained. All these factors contributed to the lack of relevant, reliable and appropriate data for decision-making in malaria in Benin. As a result of the ARM3's technical support to the National Malaria Control Program (NMCP), including the M&E unit and Health Management Information System (HMIS) at the national, regional and peripheral levels, regional statisticians have a better understanding of the data management process and are better able to train health facility medical officers on data collection and analysis. This has contributed significantly to the improvement of data quality throughout ARM3 targeted HZs.

ARM3 M&E manager, Dr. Fortuné Dagnon, discusses malaria data trends with Dr Fatembo Hypocrate in the Dassa Health Zone coordinator *Credit: ARM3*

"With technical and financial support from ARM3, the Malaria Outbreak Response Unit has been trained on malaria case management and data collection, which has allowed us to identify gaps in malaria diagnosis and treatment and to address them. As a result, I am regularly updated with timely data on the epidemiological situation of malaria and other diseases in my health zone. Through analysis of accurate data, we have been able to stop malaria outbreaks from spreading through prompt diagnosis with rapid diagnostic tests (RDTs), case management with anti-malarial drugs (ACTs) and community behavior change communication (BCC) activities"

Dr. Fatembo Hypocrate, the Dassa-Glazoué health zone coordinator

Sub-Result 3.3: Capacity in Commodities and Supply Chain Management Improved

KEY ARM3 RESULTS ACHIEVED IN YEAR 3 (PER PMP)

- ***100% of DRZs (34/34) reported quarterly on the Logistics Management Information System (LMIS); and 85% of HFs nationwide provided LMIS reports to their DRZs during last quarter***
  Available LMIS reports
- ***During the 2 latest EUV conducted in year 3 in Borgou Alibori and Atlantique Littoral, 100% of HFs (15/15) had ACTs available for treatment of uncomplicated malaria***
  EUVs April and June 2014
- ***61% of HFs (697/1,140) reported no stock-outs of ACTs, 70% of HFs (797/1140) reported no stock-outs of SP and 68% of HFs (773/1140) reported no stock-outs of RDT during the fourth quarter of the year***
  Source: RMIS April-June 2014

STRENGHTENING THE CAPACITY OF HEALTH FACILITIES

In year 3, ARM3 collaborated with the NMCP, DPMED, LNCQ, CAME (national and regional depots), DRZs, HF Directors and statisticians to improve SCM in Benin by conducting a review of the National Directives of Malaria Commodities Supply Chain and incorporating malaria commodities forecasting software (including the PipeLine® software) at CAME, NMCP and DPMED. These software systems based forecasts of malaria supplies for 2015 based on logistic information (rather than historical info or epidemiological data). ARM3 also conducted 3 End User Verification Surveys (EUVs) in year 3. The EUVs showed a significant improvement in the case management of patients that tested negative for malaria and still received an antimalarial; all 3 EUVs showed that fewer than 10% of those patients that tested negative for malaria received anti-malarials, which is far less than the year 3 target of 45%. Results of the EUVS also show that ACTs are available and patients are being tested before receiving treatment. The results are summarized in the table below:

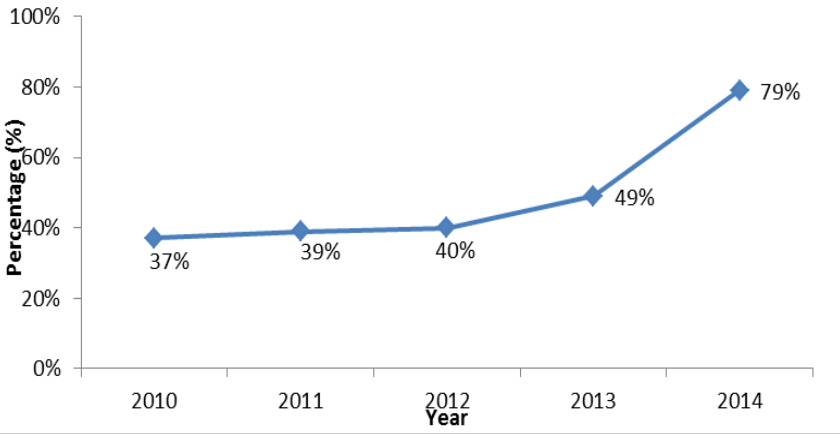
Table 3: Summary of results from 3 EUVs conducted

EUV	% of patients (all ages) who tested positive for malaria (via microscopy or RDT) that received anti-malarial (ACT)	% of patients (all ages) who tested negative for malaria (via microscopy or RDT) that received an anti-malaria (ACT)	% of government health facilities with ACTs available for treatment of uncomplicated malaria	% of facilities that submit an action plan in response to the End Use Verification Survey	Date of the EUV
Reference value/Target for year 3	85%	< 45%	85%	100%	
Mono/Couffo	87.2%	2.5%	90%	100%	November 2013
Borgou/Alibori	80.9%	7.7%	100%	100%	April 2014
Atlantique/Littoral	77.7%	1.1%	100%	100%	June 2014

* *PMP target for year 3*

Also in year 3, ARM3 upgraded MEDISTOCK V4 to MEDISTOCK V5 in all the 34 HZs in order to help health zone depots users and managers to follow HF logistics information, including HF orders, consumption information, stock availability and check quality of information submitted by HF pharmacy managers. This version allows the health zone depot managers to aggregate the malaria commodities LMIS monthly reports from the HFs in order to: (1) estimate health zones malaria commodities needs and (2) estimate real needs in malaria commodities at HF level in order to avoid stock-outs or overstocking. In addition, ARM3 supported training of users at the departmental levels.

Graph 10: LMIS/MEDISTOCK Completeness from 2010 to 2014



Since 2012, these upgrades and interventions on MEDISTOCK have led to: (1) Increased utilization of MEDISTOCK from 37% to 79% with MEDISTOCK V5; (2) Increased availability of consumption data at HFs; and (3) Increased MEDISTOCK ownership at health departments and health zones. All these outcomes resulted in the reduction of anti-malarial drug stock-outs as evidenced by EUVS results.

As a result of changes in the scope of the project, ARM3 supervision of supply chain activities at the HZ level were reduced in year 3.

SUCCESS STORIES: ARM3 Supported the Standardization of Logistics Malaria Information System to Prevent Stock-outs of Malaria Commodities

In 2012, an assessment of the malaria commodities supply chain in Benin identified four co-existing systems. Only eight percent (8%) of pharmacy managers were trained on different malaria commodities reporting systems. Anti-malarial drug (SP) stock-outs were found in 39% of HFs and 13% of the Health Zone Pharmacy Depots (DRZ). Rapid diagnostic tests (RDTs) were out of stock in 33% of the DRZs. Moreover, a significant quantity of malaria commodities had expired. Only 41% of DRZs and 62% of Zonal Hospital had been supervised in malaria commodities management during the previous six months. Most pharmacy managers (74%) confirmed having sent malaria commodities consumption information directly to the stakeholder that supported the health structures rather than sending the information to the NMCP. Malaria commodities management registers were found in 55% of DRZs, 52% of Zonal Hospitals and 40% of HFs. In September 2012, ARM3 began supporting the National Malaria Control Program (NMCP) in Benin in designing and harmonizing malaria commodities LMIS in collaboration with other stakeholders implementing the Global Fund project in Benin. ARM3 supported the NMCP in developing a malaria commodities LMIS Standard Operating Procedures (SOP) manual and trained all 34 DRZ managers as trainers or trainees and NMCP focal points in the six health departments. In January 2013, 1,630 staff from 846 HFs (91% of targeted) were trained in malaria commodities LMIS reporting tools.

A CHW measures a child's mid-upper arm circumference while conducting a routine home visit in his community *Credit: ARM3*

Over the past year, ARM3 has supported the NMCP in organizing quarterly supervisions to coach malaria commodities users in 100% DRZ (34) and 100% Zonal Hospital (27). Feedback workshops were conducted to present malaria commodities LMIS reports and key findings of supervisions were presented for decision making to improve malaria commodities performance. As a result of ARM3's support to NMCP, the following results have been achieved over the past year: (1) no malaria expired commodities have been found during supervisions and EUVs; (2) 100% of DRZ and 100% of Zonal Hospital pharmacy managers received supervision visits in the last six months; (3) poorly performing managers have been identified and replaced; (4) local and national authorities including 5 Health Department Directors participated in key supervision feedback workshops; and (5) the system has seen a marked increase in the malaria commodities LMIS reporting rate at the national level. All of these improvements allowed the NMCP to develop a more accurate forecasting of malaria commodities based on real consumption data which has led to the availability of lifesaving drugs at HFs.

"My 4 year old daughter suffered from a severe case of malaria. I kept using traditional medicine, which didn't help. We received a visit from a CHW, Bertin, who convinced us to take the child to health facility and gave us a referral note. At the health facility, following our first visit our child felt much better, which convinced us to continue her treatment. In a week, my child had completely recovered. I would like to thank Bertin who encouraged us to take our child to the health facility where malaria treatments saved her life. We are also grateful for the ARM3 project and their entire staff for working to improve the health of our community."

Mr. Herve Anagogni, a client from Zou Department telling his story to a CHW

Cross Sectional Activities: Behavior Change Communication (BCC)

BCC CAMPAIGNS/MASS MEDIA

In year 3, ARM3 continued the implementation of BCC activities to promote IPTp, LLIN use and prompt care seeking, through collaboration with radios, TV stations and community theater groups. BCC activities, were aligned with ARM3's BCC strategy and contributed to behavioral change targets, such as increased number of pregnant women receiving IPTp2 (43% RMIS 2014 versus 28.1%, RMIS 2011) and increased number of children under the age of five who had slept under a LLIN the previous night (69.7% DHS 2013 versus 20%, DHS 2006). As part of the implementation of iCCM programming in northern Benin, ARM3 expanded its BCC programmatic reach beyond malaria BCC activities to include diarrhea, pneumonia, and measles.

Following de-scoping guidelines BCC activities at the national level were transferred from JHU-CCP to MCDI for years 4 and 5.

Mass Media Events – Radio and TV Programs

ARM3 expanded the implementation of the multi-channeled BCC strategy nationwide, working with 32 local NGOs (including the 5 NGOs implementing iCCM activities with ARM3 in the north of Benin), 19 local radio stations and 2 TV stations. ARM3 provided each radio station with its "Radio Guide Document" containing key messages on malaria prevention, diagnosis and case management and quality of service. In addition to the contents described in the radio guide, four radio stations in the north broadcasted IMCI information. Based on project registers, it is estimated that on a quarterly basis, ARM3 mass media broadcasts reached approximately 1,629,500 men and 1,529,500 women. World Malaria Day (WMD) events were also broadcast on public television and a TV spot with messages on SP uptake was aired more than 30 times.

Community Theater Groups

ARM3 continued to use theater groups in Benin to increase knowledge and awareness of malaria and to encourage practices such as health seeking behaviors and utilization of malaria services. ARM3 relied on five theater groups to expand the program reach in five departments (Mono/Couffo, Ouémé/Plateau, Zou/Collines, Borgou/Alibori and Atacora/Donga). ARM3 assisted the theater groups in developing interactive scenarios (skits) and were guided by the HZs in selecting the sites and mobilizing leaders and community members. Theatre topics revolved around the key practices promoted by the project such as the use of LLIN, SP uptake, prompt care seeking in case of fever, and quality service in health facilities. It is estimated that approximately 28,000 individuals, mostly women of reproductive age and mothers, were exposed to key messages during the group's performances.

A young community member answers questions about malaria during a World Malaria Day event.
Credit: ARM3

COMMUNITY OUTREACH EVENTS

Community events served to extend the reach of malaria prevention campaigns to a wide but targeted audience and to reinforce important malaria prevention messages to families through fun and entertaining ways. In a country like Benin where many women are illiterate, community events allow people to learn by listening to relatable skits.

World Malaria Day (WMD) Events

ARM3 supported WMD events in April 2014 by providing technical assistance to the NMCP. The NMCP organized a carnival road show, fairs and mass media presentations. Representatives from the MOH, WHO, USAID, technical partners, local health authorities, and civil society, including school children, attended the launch and visited booths. All ARM3 radio partners (19) supported WMD by broadcasting messages on the importance of key saving practices, free malaria treatment for pregnant women and children under the age of five, and to announce the next national LLIN distribution campaign.

Community Event in Figneyon

In March 2014, ARM3 collaborated with the Cotonou 6 HZ to support a community education event in Figneyon to promote key life-saving malaria practices among primary beneficiaries. Figneyon, in the South of Benin, was selected because it is a densely populated area close to the Atlantic ocean where many low-income residents are at higher risk for malaria due to continuous exposure to mosquito bites. Furthermore, there is no health facility adjacent to Figneyon, depriving low income residents, especially women of reproductive age, of easy access to basic health care services. With support from CHWs, Cotonou 6 HZ, the Djomehoutin health center, and the NGO *Centre de Pensée et Action pour un Développement Economique et Social*, the event reached over 1,000 beneficiaries, most of whom were vulnerable women. Educational messages about IPTp uptake, LLIN use, and free malaria care for children in government HFs were presented to community members by health workers and through theatrical group sketches, which were both innovative and engaging for the target audience. These types of collaborative events demonstrate innovative and engaging ways to change target audiences behaviors.

PMI Advisor and USAID Family Health Team associate, Michelle Kouletio, at the ARM3 stand at the 2014 World Malaria Day event in Saké
Credit: ARM3

Financial Summary

BUDGET, FUNDS, EXPENSES

Refer to **Annex 4** for financial status including, the 5 year approved budget, total funds obligated, cumulative disbursements, accrued expenses, total expenses and remaining balance for the year ending September 30, 2014 as well as projected expenses for the first quarter of year 3.

Cumulative estimated expenditures from inception to those invoiced as of September 30, 2014 of each sub grantee are as follows:

- **Management Sciences for Health (MSH):** $2,760,226
- **Africare:** $1,137,883
- **John Hopkins University, Center for Communication Programs (JHU-CCP):** $1,518,114

Annex 6 presents the End-of-Year SF 425 financial report form

Project Management

FIELD OFFICE

In year 3, ARM3 and its governmental and private sector partners expanded services and continued efforts to strengthen the capacities of government agencies to all 34 Health Zones (HZs) and 6 Departmental Health Directions (DDSs) in Benin to plan and implement malaria-related activities. Cross-sectional BCC activities continued in year 3 as part of the ARM3 BCC Strategy and national campaigns in the 34 HZs. ARM3 continued its work with the private sector through training and supervision as well as assistance to the MOH for the registration and licensing of private health care providers. Malaria diagnosis activities were conducted in all 34 HZs. All of the 34 HZs were asked to conduct decentralized OTSS but only 20 sent their reports to ARM3. Collaborative Approach activities conducted in 17 HFs and in 1 HZ ended in September 2014. ETAT implementation in the 12 hospitals was completed in year 3. ICCM activities implemented in 5 HZs in Northern Benin through contracts with NGOs were conducted from November 2013 to September 2014. At the national level, ARM3 continued to strengthen the capacities of the National Malaria Control Program (NMCP). M&E and SCM activities were also conducted in all the 34 HZs, at the regional and national level. Lastly, ARM3 staff participated in the 2015 MOP Team meetings conducted in Cotonou and supported visits to projects sites.

The main challenges faced by the field office were as follows: (1) Coordination of work plan development and implementation with the NMCP; (2) meeting the requirements of developing several versions of work plans and budgets; (3) working in a transitional period characterized by higher level of uncertainty; (4) early termination of project personnel; (5) low staff morale resulting from the challenges listed above and the departure of ARM3's COP.

Staff Transition: At the end of September 2014, Lee Yellott, ARM3 COP, began his transition out of the project and Urbain Amegbedji, Private Sector and NGO Manager, was appointed as interim Chief of Party. Simultaneously, ARM3's Technical Coordinator, Moussa Thior, left the project. ARM3's Abomey office was closed; and three local staff from the Abomey office and two from the Cotonou office under contracts with MCDI were terminated.

JHU-CCP field operations closed at the end of July 2014. The BCC Manager, Guillaume Bakadi, returned to the U.S. and local staff contracts (2) were terminated. JHU-CCP home office conducted close-out of activities through September 2014. Africare field activities were conducted through August 2014. All field staff contracts (16) under their sub-award agreement with MCDI were terminated by the end of September 2014, concurrently with the close out of the project conducted by Africare's HO. MSH reduced its staff from six to three remaining SCM staff. Case management responsibilities have now been transferred to MCDI.

HOME OFFICE

ARM3's Revised Application and Work plan for Year 3: MCDI HO staff worked with USAID to adapt the ARM3 program to the Partial Termination requirements. In the absence of an approved work plan and budget for year 3 HO submitted a transitional work plan through June 2013, which was approved in February of the same year. A subsequent version of the work plan through September 2014 was approved in June 2013.

The main challenges faced by MCDI as a result of the de-scoping were as follows: (1) effectively managing activities during the transition; 2) addressing close-out activities of the consortium partners that left ARM3; (3) termination of project personnel according to Benin labor regulation; and (4) planning for the transition of ARM3's COP.

Work Plan and Budget for Year 4: ARM3 developed and submitted its work plan for year 4 and corresponding budget to USAID for review and approval. The work plan was developed in close collaboration and alignment with ARM3's field team, PMI's MOP 2014, the NMCP's 2014 work plan, and guidance from PMI/USAID team in Benin. ARM3 also worked with new USAID project in Benin, including ANCRE and APC to further align project activities and avoid duplication of efforts. In early October 2014, ARM3's work plan was presented to the NMCP and DSME.

Operational Research Activities: In October 2013, MCDI collaborated with the CDC in the implementation of the Health Facility Survey (HFS) in Benin. Following the completion of the survey, HO staff worked with the CDC in the review of the collected data and preliminary analysis from the database. MCDI also supported the development of the iCCM CommCare assessment protocol for the evaluation of its mHealth pilot project, which was conducted in late November 2014. Finally, in August 2013, MCDI collaborated with JHU-CCP to develop a protocol for the assessment of ARM3 BCC activities. This protocol has been approved by USAID approval and will be conducted in 1st quarter of year 4.

Search for New COP Candidates: In September 2014, MCDI initiated a search for a COP replacement and interviewed several qualified candidates. MCDI completed the selection process and selected a qualified COP by October 2014, who will travel be travelling to Benin in early January 2015.

MCDI HO STTA: Refer to Annex 4 for list of visitors and STTA during year 3.

ANNEXES

Annex 1 - Comparison of year 3 targets with achievements, according to ARM3's Performance Monitoring Plan (PMP)

Annex 2- ARM3 PMI Indicators for Year Fiscal Year 2014

Annex 3 – iCCM Indicators for Five NGOs (Cumulative – year 3 Ending)

Annex 4 – List of Visitors to ARM3 in year 3

Annex 5- ARM3 Annual Financial Report, Reporting from Inception (October 3, 2011) through September 30, 2014 – Cumulative

Annex 6 - SF 425

Annex 1 - Comparison of year 3 targets with achievements according to ARM3's Performance Monitoring Plan (PMP)

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
Result 1: Implementation of Malaria Prevention Programs in Support of the National Strategy Improved											
1.1	**IPTp Uptake Increased**										
1.1.1	**PMP Indicator #1**	Women who receive two or more doses of SP during their last pregnancy within the last two years in intervention areas will reach 85%	% of women who have completed a pregnancy in last two years who received two or more doses of IPTp during that pregnancy	2006	3.0%	DHS-2006	**22.8% (total)** **24% (urban)** **21.9% (rural)**	**70%**	**22.8%** **24.2% (Urban)** **21.8% (Rural)**	DHS final report, October 2013[4]	**The increase noted from the baseline value cannot, to a large degree, be attributed to ARM3 interventions as the gap between the DHS reports does not significantly encompass implementation of ARM3 activities***
1.1.2	**PMP Indicator #1.a**	1.1.2: Proportion of women attending antenatal clinics who receive IPT2 under direct observation by a health worker will reach 85%	Proportion of women attending antenatal clinics who receive IPT2 under direct observation by a health worker	2011 (Q4/FY11)	28.1%	RMIS	**38.3%**	**75%**	**Q1: 15.7%**** **Q2: 31.6%** **Q3: 42.8%** **Q4: 43%** (39,809/ 92,716)	RMIS, June 2014 (any RMIS data has been validated for 2014)	**Year 3 has not been reached, however progress has been made since PY1 and PY2. There was a 5% increase between year 3 and PY2 and a 15% increase since PY1.**
1.1.3	**PMP Indicator #21**	Health workers trained in IPTp with USG funds	Number of health workers trained in IPTp with USG funds	--	--	--	**805 health workers trained in 16 Health Zones**	**840 health workers from 34 HZ (re)trained in IPTp using USG funds**	**1,913 health workers trained in 19 HZs**	ARM3 Reports	**Year 3 target exceeded.** - **543 Public sector health workers** - **156 Private sector health workers** - **1,214 community-based health workers**

[4] **DHS was implemented between December 2011 and March 2012 and final report issued in 2013**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
1.2	**Supply and Use of ITNs Increased**										
1.2.1	**PMP Indicator #2**	Proportion of pregnant women who slept under an ITN the previous night in intervention areas will reach 85%	% of pregnant women who slept under an ITN the previous night Note: ITN was obtained or treated with an insecticide in the previous 12 months	2006	19.6%	DHS-2006	**75.5%** 73.9% (urban) 76.5% (rural)	**75%**	**74.6%** 72.1% (Urban) 76% (Rural)	DHS final report, October 2013	**ARM3 conducted BCC activities to promote ITN use. A BCC assessment will be conducted in PY4, as well as the National ITN distribution campaign. ***
1.2.2	**PMP Indicator #3**	Proportion of children under-five who slept under an ITN the previous night in intervention areas will reach 85%.	Percentage of children under five who slept under an ITN the previous night. Note: ITN was obtained or treated with an insecticide in the previous 12 months	2006	20.1%	DHS-2006	**71.0% (total), 70,5% (urban), 71,3% (rural)**	**75%**	**69.7%** 68.8% (Urban) 70.3% (Rural)	DHS final report, October 2013	**ARM3 conducted BCC activities to promote ITN use. A BCC assessment will be conducted in PY4, as well as the National ITN distribution campaign. ***
1.2.3	**PMP Indicator #4**	Proportion of households with a pregnant women and/or children under five which own at least one ITN will reach more than 90%.	% of households with a pregnant woman and/or child(ren) under-five that own at least one ITN	2006	25.0%	DHS-2006	**79.8% (Total), 78.2% (Urban), 81.0% (Rural)**	**80%**	**74.6%** 72.1% (Urban) 76% (Rural	DHS final report, October 2013	**ARM3 conducted BCC activities to promote ITN use. A BCC assessment will be conducted in year 4, as well as the National ITN distribution campaign. ***

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
1.2.4	**PMP Indicator #4.a**	100,000 LLINs will be distribution through social marketing among employees and dependents of CEBAC-STP member organizations	# of LLINs distributed through social marketing among employees and dependents of CEBAC-STP member organizations	--	--	--	**44,000**	**55,000**	<u>Phase 1&2 LLINs distributed respectively:</u> 44,000 and 54,366 Phase 1 & 2 revenue collected: $167,472	ARM3/CEBAC LLIN distribution monitoring / supervision visits and reports Joint ARM3/ CEBAC Bank Statements	**Target of LLIN distribution to private sector was reached.**
Result 2: Malaria Diagnosis and Treatment Activities in Support of the National Malaria Strategy Improved											
2.1	**Diagnostic Capacity and Use of Diagnostic Testing Improved**										
2.1.1	**PMP Indicator #5**	Proportion of targeted health centers with the ability to perform biological diagnostics for malaria (either microscopy or rapid diagnostic testing) will be 85%	% of targeted health centers that have the following: 1) personnel trained in malaria diagnostics, 2) no stock-outs affecting malaria diagnostics, 3) functional microscope (non-RDT facilities only)	2011	95.8%	OTSS Round 7 (IMad)	**88.3%**	**85%**	**<u>Results from OTSS</u> <u>Round 13</u>** 84% (57/68) **100%** of HFs with personnel trained in diagnostics (68/68) **84%** of HFs w/ no stock out in diagnostics commodities (57/68) **100%** of HFs with a functional microscope (non-RDT facilities only)	OTSS Round 13 completed in June 2014	**Target exceeded in health facilities that reported information with trained personnel in diagnostics and with functional microscopes.** **‡ Due to constraints in the work plan approval, decentralization of OTSS, and the limited number of HFs able to implement OTSS before the end of the MOUs with HZs only 63/118 requested funding for the OTSS supervision.** **Based updated data for HZs that received funds to implement OTSS, 70 HFs instead of the expected 63 implemented OTSS and this analysis is based on**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
									(68/68)		**information available from the 68 out of 70 HFs that sent completed reports.**
2.1.2	**PMP Indicator #22**	On average, at least 1 health worker from each staff type (lab/clinic) per facility per supervisory visit trained in malaria diagnostics (microscopy/RDTs) with USG funds	# of health workers trained in malaria diagnostics (microscopy/RDTs) with USG funds	2011	Lab: 1.4 Clinic: 1.3	OTSS Round 7 (IMad)	**224 health workers**	**0 (WP Y3)22 laboratory supervisors retrained, 34 new supervisors trained 36 new microscopists trained**	**2,546 health workers**	ARM3 training reports	**The number of supervisors/new microscopists trained responds to the number of supervisors needed and new microscopists available for training. The health workers that received supervision include:** - **1,121 public sector health workers** - **156 private sector health workers** - **1,214 community-level workers** - **27 new supervisors on OTSS** - **28 lab technicians received refresher training on microscopy/RDT**
2.2	**Case Management of Uncomplicated and Severe Malaria Improved**										

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
2.2.1.a	**PMP Indicator #6**	90% of suspected malaria cases will be tested via microscopy/RDT	% of suspected malaria cases submitted to laboratory testing	2011 (Q4/FY11)	36.7%	RMIS	**84.8% (all ages) 86.4%<5 83.4%>5**	**80%**	****Q1: 78.8%** (all ages) **Q2: 79.9%** (all ages) **Q3: 50.2%** (all ages) **Q4: 84%** (all ages) (363,830/ 433,160) **85.6% < 5** (169,135/ 197,659) **82.7% ≥ 5** (194,695/ 235,501	RMIS, June 2014 RMIS validation data will be conducted in at the end of year 44, Q1 (any RMIS data has been validated for 2014)	**Target maintained for year 3. ARM3 will continue to support NMCP in order to achieve the LOP target.**
2.2.1.b	**PMP Indicator #7**	95% of patients (all ages) who tested **positive** (via microscopy or RDT) will receive an effective anti-malarial.	% of patients (all ages) who tested positive for malaria (via microscopy or RDT) that received anti-malarial.	--	--	EUV Report	**Micro + RDT 82.4 (all ages)**	**85%**	Micro + RDT **All cases** **87.2%** (EUV Mono/ Couffo) **80.9%** (EUV Borgou/ Alibori) **77.7%** (EUV Atlantique/ Littoral)	EUVs reports, in 2014	**Target reached for Mono/Couffo. Significant progress made in other regions.** **Note: These results represent a subset of the national picture. As explained in the year 1 Annual Report the LOP and annual targets are now specific to RDT or microscopy. The revised LOP and annual targets were based on nationally representative findings from the April 2012 EUVS and did not take into consideration that subsequent EUVs would be localized to one region.**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
2.2.2	**PMP Indicator #8**	Less than 35% of patients (all ages) who tested **negative** for malaria (via microscopy or RDT) receive an anti-malarial (ACT)	% of patients (all ages) who tested negative for malaria (via microscopy or RDT) that received an anti-malaria (ACT)	--	--	EUV Report	**Micro + RDT 1.8 (all ages)** **1.2% < 5** **2.3 > 5** **Micro-all ages 8.7%** **RDT - all ages 1.4%**	**< 45%**	**All cases** **2.5%** (EUV Mono Couffo) **7.7%** (EUV Borgou /Alibori) **1.1%** (EUV (Atlantique /Littoral)	EUVs report, 2014	**Target exceeded for all 3 components of this indicator Note: These results represent a subset of the national picture. As explained in the year 1 Annual Report the LOP and annual targets are now specific to RDT or microscopy.** **The revised LOP and annual targets were based on nationally representative findings from the April 2012 EUVS and did not take into consideration that subsequent EUVS would be localized to one region.**
2.2.3	**PMP Indicator #9**	90% of health workers working in facilities that receive supervision will be supervised on diagnostics and/or case management of malaria at least once every 6 months	% of health workers working in targeted health facilities that receive supervision at least once every 6 months	--	--	--	**OTSS** 32.2% (76/236) with at least 1 visit 7.6% (18/236) with 2 visits **Integrated Supervision** In addition, 534 facilities received integrated supervision by the HZs.	80%	**OTSS** **53.4%** (63/118) (Year 3 Q12 report)	ARM3 Supervision Reports, Year 3 Q12 report	**Funding for OTSS visits has been disbursed to the HZs that submitted a request for funding (up-to-date 20 based on available OTSS reports).** **21 hospitals and 49 HFs (a total of 70) sent their reports out of 63 that are expected to implement OTSS.** **‡Target not met due to work plan changes.** **Integrated Supervision** **An estimated number of 561 HFs received integrated supervision within 27 health zones**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
2.2.4	**PMP Indicator #10**	Proportion of children under-five with fever in the last two weeks who received treatment with ACTs within 24 hours of onset of fever in targeted areas will increased to 85%	% of children under-five with suspected malaria (fever) in the last two weeks who received treatment with ACTs within 24 hours of onset of their symptoms	2006	1%	DHS-2006	**12.3%**	*n/a*	***12.3%***	DHS final report, October 2013	**Refer to regional EUVS results.** **In year 3, ARM3 began the implementation of regional EUV surveys at the request of PMI.**
2.2.5	**PMP Indicator #11**	Percent of mothers/caretakers who sought treatment with the use of ACTs for their under-five children with suspected malaria (fever) *within 24 hours of onset of their symptoms*	> 90% of mothers / caretakers who sought treatment with the use of ACTs for their under-five children with suspected malaria (fever) *within 24 hours of onset of their symptoms*	2006	<1.0%	DHS-2007	**6.7%**	*n/a*	***6.7%***	DHS final report, October 2013	**Refer to regional EUVS results.** **In year 3, ARM3 began the implementation of regional EUV surveys at the request of PMI.**
2.2.6	**PMP Indicator #12**	Develop, review, update and implement with the MOH the malaria guidelines and training curricula on malaria diagnosis and treatment at schools of nursing and educational institutions	# of schools of nursing and educational institutions that have updated their malaria guidelines and curriculum	--	--	--	**2**	**2**	**2**	ARM3 program reports	**Target reached.** **Renewed MOUs with INMeS and Faculté des Sciences for year 3; Total of 2** **No additional MOUs were signed in year 3**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
2.2.7	**PMP Indicator #13**	Support training in Integrated Management of Childhood Illnesses (IMCI) for newly hired health workers in the private sector to contribute to national scale-up of IMCI	# of newly hired health workers trained in IMCI	--	--	--	**PY1 Total - 48** 21 male 27 female **PY2 Total - 24** 9 male 15 female	**18**	**0**	ARM3 program training reports	**Target reached in year 2. By request of the DSME, no additional trainings were conducted in IMCI in year 3 as the National Guidelines are being updated.** **48 + 24 = 72 (Total to date)**
2.2.8	**PMP Indicator #14**	Support refresher training and supervision to ensure appropriate management and referral practices for severe malaria in all 55 hospitals nationwide	# of hospitals that received a refresher training for severe malaria management	2011	21/46 hospitals	PISAF Project Reports	**PY2 Total - 8** 3 public 5 private		**25 hospitals participated in learning sessions**	ARM3 program training reports	**Note: The original LOP target was 55 hospitals. This value has been revised down to 29 as PISAF has already provided training for severe malaria case management to 21 hospitals.** **21 previously trained by PISAF +25 = 46 (46/50)**
2.2.9	**PMP Indicator #23**	Health workers trained in case management with artemisinin-based combination therapy (ACTs) with USG funds	# of health workers trained in case management with artemisinin-based combination therapy (ACTs) with USG funds	--	--	--	**907**	**940 health workers from 19 HZs (re)trained in case management with ACTs using USG funds**	**1,277 health workers**	HZ training reports	**Target exceeded** - **1,121 public sector health workers (461 male, 660 females)** - **156 private sector health workers**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
Result 3: The National Health System's Capacity to Deliver and Manage Quality Malaria Treatment and Control											
3.1	**NMCP's Technical Capacity to Plan, Design, Manage and Coordinate a Comprehensive Malaria Control Program Enhanced**										
3.1.1	**PMP Indicator #15**	The NMCP technical working groups (monitoring and evaluation, supply chain, communication, and case management) are meeting regularly as planned	Number of NMCP technical working groups (monitoring and evaluation, supply chain, communications, and case management) meetings	--	--	--	**Case Mgmt. - 1 BCC - 2 SCM - 6 M&E - 3**	**Case Mgmt. - 2 BCC - 2 SCM - 2 M&E - 2**	****Case Mgmt. - 1 (Q1) SCM - 4 (Q2, Q4) BCC - 1 (Q3) M&E (0)**	TWG Meeting minutes	**Target reached for SCM and Case Mgmt. but not for BCC and M&E. Additional technical assistance on BCC and M&E provided on BCC workshops, seminars, and training activities.**
3.2	**Ministry of Health (MoH) Capacity to Collect, Manage and Use Malaria Health Information for Monitoring, Evaluation and Surveillance Improved**										
3.2.1	**PMP Indicator #16**	The national Routine Malaria Information System and sentinel surveillance sites are providing high quality information on a regular and timely basis for decision-making	% of targeted facilities reporting through the Routine Malaria Information System and sentinel surveillance sites are providing complete information on regular and timely basis for decision-making	2011 (Q4/FY11)	35.2%	RMIS	**81.2% (859 health facilities reporting out of 1058 health facilities) IRSP sentinel surveillance : 100%**	**85%**	****Year 3 Results Q1: 74.6% Q2: 93% Q3: 84.7% Q4: 79%** A total of 1,144 facilities are currently enrolled in RMIS (44 new HFs have been enrolled during year 3)	RMIS results are from Oct 2013 -June 2014 RMIS validation data will be conducted in at the end of PY4, Q1 for data from January to June 2014 (any RMIS data has been validated for 2014)	**Target maintained respect to values from year2. However year 3 target was not achieved. Note: The reduction in the RMIS reporting in the last 2 quarters is attributable to strikes. The overall increases over the past two years can be attributed to the following: 1) Leadership of the health zone coordinators; 2) Improved adherence of agents to the RMIS reporting schedule; 3) Follow-up of data validation workshop recommendations made by ARM3 M&E field coordinators each quarter; 4) Quarterly supervision of health workers in data collection sites; 5)**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
											Routine Data quality audits
3.3	**MoH Capacity in Commodities and Supply Chain Management Improved**										
3.3.1	**PMP Indicator #17**	The national malaria commodity supply chain is functioning with a Logistics Management Information System (LMIS) providing quarterly and annual reports.	% of quarterly and annual reports generated by the LMIS per year	2011	0%	LMIS	**100% of the 34 DRZs reported quarterly**	**90%**	**100%** (Quarterly Reports) (34/34)	LMIS	**Target reached for quarterly reports.** **Note: All 34 DRZs have reported data, but not all DRZ reports cover all of the health facilities under their supervision (only 85% of health facilities reported**
3.3.2	**PMP Indicator #18**	85% of health facilities have ACTs available for treatment of uncomplicated malaria for patients of any age at any point in time covered by project-supported End Use Verification surveys	% of government health facilities with ACTs available for treatment of uncomplicated malaria (sample size is limited to scope of End Use Verification surveys)	2011	80.0%	RMIS	**88%**	**85%**	**90%** (EUV Mono Couffo) **100%** (Borgou/ Alibori) **100%** (EUV Atlantique /Littoral)	EUVs 2014	**Target exceeded in all regional areas.** **Sample size is limited to scope of EUVS.**
3.3.2.a	**Indicator #18.a**	85% of health facilities report no stock-outs of ACTs	% of health facilities reporting no stock-outs of ACTs	2011 (Q4/FY11)	77.3%	RMIS	**69.7%**	**85%**	****Q1: 52.5%** (583/1,110) **Q2: 52.4%** (592/1,130) **Q3: 60.1%** (688/1,144) **Q4: 61.1%** (697/1,140)	RMIS, June 2014 (any RMIS data has been validated for 2014)	**Target not reached for year 3.** **The availability of ACTs was affected due to administrative delays and lack of timely quality control. ARM3, however, worked with the NMCP to resolve the delays by the end of year 3.**

#	Results / Sub-results	ARM3 LOP Target	Indicator Definition	Baseline			Year 2 Actual	Year 3 Target	Year 3 Actual *(As of Dec 2014)*	Data Source	Comments and Gap Analysis
				Year	Value	Source					
3.3.3	**PMP Indicator #19**	Complete implementation of reforms initiated in CAME to improve governance and transparency operations	% of facilities in compliance with CAME reforms	2011	0%		**0%**	**60%**	**90%**	CAME Reports Central and Supply team	**This was achieved through the new regulations toward improving the management practices, incorporation of stock management in the forecasting and including Pipeline software, in addition to eliminating CAME's business plan on increasing storage**
3.3.4	**PMP Indicator #20**	Results from the End-Use Verification Surveys are analyzed and used to identify management and operational issues in the commodity supply chain system	% of facilities that submit an action plan in response to the End Use Verification Survey	--	--	--	**0%**	**100%**	**100%** (15/15) (Borgou/ Alibori) **100%** (15/15) (Ouémé/ Plateau) Atlantique/ Littoral feedback pending	EUVS, June 2014	**Target achieved for BA and OP. Action plans at the health zone level have not been developed yet for AL.**

*** Please note ARM3 is not directly responsible for mass distribution of LLINs, and consequently has limited control of the LLIN related outcomes.**

**** Information for year 3 is displayed by quarter to show progression throughout the year.**

‡ Due to constraints in the work plan approval, decentralization of OTSS, and the limited number of HFs able to implement OTSS before the end of the MOUs with HZs only 63/118 requested funding for the OTSS supervision. 16 hospitals and 43 HFs sent their reports out of 63 that implemented OTSS. This analysis is based on the information available from the 59 reporting HFs.

Annex 2 – ARM3 PMI Indicators for FY 2014

BENIN PMI Malaria Indicators	2014 Actual	Notes	Indicator definitions
Number of health workers trained in case management with artemisinin-based combination therapy (ACTs) with USG funds	2,610	During year 3, ARM3 renewed MOUs with the previous 25 HZs and 4 DDS of PY2 (Atlantique Littoral, Ouémé Plateau, Zou Collines and Borgou Alibori) and signed new MOUs with 9 HZs and 2 DDS in Atacora Donga and Mono Couffo to conduct training on malaria treatment, including ACT use. ARM3 also launched ICCM activities and trained CHWs on case management of uncomplicated malaria with ACTs. Lastly, ARM3 trained (i) private sector health workers from ROBS, AMCES and ACPB on case management; (ii) Abomey Calavi health workers in case management with ACTs and 13 hospitals health workers on case management of severe malaria and the Emergency Triage and Treatment (ETAT) approach.	*Number of health workers (doctor, nurse, nurse assistant, clinical officer or community/village health worker) trained in case management with artemisinin-based combination therapy (ACTs) with USG funds.*
Male	1,379		
Female	1,231		
Number of health facility workers trained	1,396		*Number of health workers (doctor, nurse, nurse assistants, clinical officer or community/village health worker) trained in case management with artemisinin-based combination therapy (ACTs) with USG funds.*
Number of community-level workers trained	1,214		
Number of artemisinin-based combination therapy (ACT) treatments purchased by other partners that were distributed with USG funds		PMI does not pay for distribution of partners ACT	*Number of ACT treatments purchased by other partners (not USG) but were distributed (to central, regional, or district health facility) with USG funds*
Number of artemisinin-based combination therapy (ACT) treatments purchased with USG funds	2,032,170		*Number of ACT treatments purchased with USG funds.* *"Purchased" = ACTs for which a purchase order/invoice has been issued by the Procurement Service Agent within the fiscal year October 1, 2013, through September 30, 2014.*
Number of artemisinin-based combination therapy (ACT) treatments purchased in any fiscal year with USG funds that were distributed in this reported fiscal year *(Please note that the disaggregates have been dropped this year)*	1,147,590	This is the number of treatments received at CAME this year.	*Number of ACT treatments purchased in any fiscal year with USG funds that were distributed in this reported fiscal year. (i.e. October 1, 2013, through September 30, 2014)* *"Distributed" = ACTs that have moved out from the central level of a country to peripheral levels. Peripheral points include: regional and district warehouses, facilities (e.g., hospitals, clinics, health posts), and community health workers.*

BENIN PMI Malaria Indicators	2014 Actual	Notes	Indicator definitions
Number of health workers trained in malaria laboratory diagnostics (rapid diagnostic tests (RDTs) or microscopy) with USG funds	2,546	During year 3, ARM3 renewed MOUs with the previous 25 HZs and 4 DDS of PY2 (Atlantique Littoral, Ouémé Plateau, Zou Collines and Borgou Alibori) and signed MOUs with 9 HZs and 2 DDS in Atacora Donga and Mono Couffo to conduct training on malaria diagnosis. ARM3 also launched ICCM activities and trained CHWs on diagnosis. Lastly, ARM3 trained (i) private sector health workers from ROBS, AMCES and ACPB on diagnosis, (ii) new supervisors on OTSS and (iii) retrained biotechnologists on diagnosis	*Number of health workers (doctor, nurse, nurse's assistant, clinical officer, community/village health worker, lab technicians), trained in malaria laboratory diagnostics (RDTs or microscopy) with USG funds*
Male	1,357		
Female	1,189		
Number of health facility workers trained	1,332		
Number of community-level workers trained	1,214		
Number of malaria rapid diagnostic tests (RDTs) purchased with USG funds	1,781,100		*Number of RDTs purchased with USG funds. "Purchased" = RDTs for which a purchase order/invoice has been issued by the Procurement Service Agent within the fiscal year October 1, 2013, through September 30, 2014.*
Number of rapid diagnostic tests (RDTs) purchased in any fiscal year with USG funds that were distributed in this reported fiscal year	1,242,925	Based on CAME distribution data	
Number of health workers trained in intermittent preventive treatment in pregnancy(IPTp) with USG funds	1,913	During year 3, ARM3 renewed MOUs with the 25 HZs and 4 DDS that were previously implementing MOUs in PY2 (Atlantique Littoral, Ouémé Plateau, Zou Collines and Borgou Alibori) to conduct training on IPTp and Inter Personal Communication (IPC). In addition to these HZs and DDSs, ARM3 also signed MOUs with 9 HZs and 2 DDS in Atacora Donga and Mono Couffo to conduct training on IPTp, ANC, and IPC. ARM3 launched ICCM activities in two HZs in northern Benin and trained CHWs on IPTp. Lastly, ARM3 trained private sector health workers from ROBS, AMCES and ACPB on IPTp	*Number of health workers (doctor, nurse, nurse's assistant, clinical officer) trained in IPTp with USG funds.*
Women	1,031		
Men	882		
Number of sulfadoxine-pyrimethamine (SP) tablets purchased with USG funds	3,367,158		*Number of SP tablets purchased with USG funds. "Purchased" = SP tablets for which a purchase order/invoice has been issued by the Procurement Service Agent within the fiscal year October 1, 2013, through September 30, 2014.*
Number of sulfadoxine-pyrimethamine (SP) tablets purchased in any fiscal year with USG funds that were distributed in this reported fiscal year	2,018,208		

Annex 3 – iCCM Indicators for Five NGOs (Cumulative – year 3 Ending)

Indicator	Q13F[1]	Q2	Q3	Q4	Cumulative for PY3
# of children <5 treated for malaria according to national policies	-	4,397	10,888	10,549	25,834
# of children <5 treated for diarrhea according to national policies	-	114	945	447	1,506
# of children <5 treated for ARI according to national policies	-	282	1,586	1,328	3,196
% of children who completed their immunization before their first birthday according to the Expanded Program on Immunization	-	91.5%	85%	82%	86%
# of new CHWs selected	-	67	91	-	158
# of CHWs trained on the iCCM package	-	1,214		242	1456
# of educational sessions performed by the CHWs*	-	23	765	503	1,291
# of home visits conducted by the CHWs*	-	620	8,120	12,575	21,315
# of CHWs supervised by local NGOs	-	352	728	524	1,604
# of supervision visits conducted by local NGOs	-	5	5	5	15

Source: ARM3 Reports and Reports from the 5 local NGOs

**NB: Data for these indicators are not reported from all 5 HZs; the iCCM Parakou team did not perform updates on data before April 2014*

Annex 4 - Table: List of Visitors to ARM3 in Year 3

#	Name	Title/Institution	Dates	Purpose
1	Moussa Dambo	Finance Officer, MCDI	10/25/2013-11/09/2013	To provide Home Office support to the Benin ARM3 Finance team during the transition period between personnel.
3	Rima Shretta	Principle Technical Advisor for Malaria, MSH	1/19/2014-2/1/2014	To provide technical assistance to ARM3 by training the national quantification committee on malaria commodities quantification using the multi-partners quantification manual, and coach the national quantification committee to forecast national needs in malaria commodities (ACTs and RDTs).
4	Safoura Berthe	Deputy Director of SIAPS, MSH	1/25/2014-1/31/2014	To support the training of the malaria commodities quantification committee on malaria commodities quantification using the multi-partners quantification manual, and coach the national quantification committee to forecast national needs in malaria commodities (ACTs and RDTs).
6	Chris Welch	Deputy Director, Project Quality Assurance and Coordination, MSH	9/20/2014-10/2/2014	To provide technical and managerial feedback on ARM3 and to provide technical guidance to the ARM3 performance improvement approach and case management

Annex 5 - ARM3 Annual Financial Report, Reporting from Inception (October 3, 2011 through September 30, 2014 – Cumulative)

Cumulative estimated expenditures from inception to September 30, 2014 are as follows:

BENIN ARM3 QUARTERLY ACCRUALS FINANCIAL REPORT
CUMULATIVE ESTIMATES REPORTING FROM START DATE OF PROJECT (OCTOBER 3, 2011) THROUGH SEPTEMBER 30, 2014

Medical Care Development International
Accelerating the Reduction of Malaria Morbidity Program (ARM3) Benin
Cooperative Agreement: AID-680-A-11-000001

		5 Year Revised Budget	Funds Obligated though September 30, 2014*	Expenses in Blackbaud as of 9/30/2014**	Accrued Expenses through September 30, 2014	Total Estimated Expenses from Inception (Oct 3, 2011) through September 30, 2014	September 30, 2014 Estimated Remaining Balance (from Obligated funds)	Projected Expenses FY14 Quarter 1: from Oct to Dec 2014	Projected Remaining Funds at Dec 2014
		(A)	(B)	(C)	(D)	(E=C+D)	(F=B-E)	(G)	(H)
I.	PERSONNEL	$3,251,588		$ 2,068,018		**$2,068,018**			
II.	FRINGE BENEFITS AND ALLOWANCES	$1,367,752		$ 813,962		**$813,962**			
III.	TRAVEL	$701,791		$ 640,337		**$640,337**			
IV.	EQUIPMENT	$217,047		$ 219,575		**$219,575**			
V.	SUPPLIES	$109,628		$ 95,017		**$95,017**			
VI.	CONTRACTUAL SERVICES	$226,070		$ 41,169		**$41,169**			
VII.	TRAINING	$1,780,319		$ 1,680,871		**$1,680,871**			
VIII.	SUBCONTRACTS	$5,651,419		$ 5,234,982	$87,453	**$5,322,435**			
IX.	OTHER COSTS	$2,720,026		$ 1,677,411	$55,000	**$1,732,411**			
X.	TOTAL DIRECT COSTS	$16,025,639		$ 12,471,341	$142,453	**$12,613,794**			
XI.	INDIRECT COSTS	$3,972,262		$ 2,746,509	$22,974	**$2,769,482**			
XII.	**TOTAL EXPENSES**	**$19,997,901**	**$17,000,729**	**$15,217,850**	**$165,427**	$15,383,277	**$1,617,452**	**$784,847**	**$832,605**

*New obligation received on 7/10/2014 which is reflected in this total

Annex 6- SF 425

Annex 5 shows the SF 425 that MCDI has submitted to USAID. The recipient cost share requirement has been met.

FEDERAL FINANCIAL REPORT

(Follow form instructions)

1. Federal Agency and Organizational Element to Which Report is Submitted USAID-US Agency for International Development	2. Federal Grant or Other Identifying Number Assigned by Federal Agency (To report multiple grants, use FFR Attachment) AID680A1100001			Page 1	of pages
3. Recipient Organization (Name and complete address including Zip code) Medical Care Development, Inc. 11 Parkwood Drive, Augusta, ME 04330					
4a. DUNS Number 07-173-3638	4b. EIN 01-6022787	5. Recipient Account Number or Identifying Number (To report multiple grants, use FFR Attachment) BENIN ARM 3	6. Report Type X Quarterly ☐ Semi-Annual ☐ Annual ☐ Final	7. Basis of Accounting ☐ Cash X Accrual	
8. Project/Grant Period From: (Month, Day, Year) 10/3/2011		To: (Month, Day, Year) 10/02/2016	9. Reporting Period End Date (Month, Day, Year) 09/30/2014		

10. **Transactions**	Cumulative
(Use lines a-c for single or multiple grant reporting)	
Federal Cash (To report multiple grants, also use FFR Attachment):	
a. Cash Receipts	$14,539,844.84
b. Cash Disbursements	$15,383,491.16
c. Cash on Hand (line a minus b)	($843,646.32)
(Use lines d-o for single grant reporting)	
Federal Expenditures and Unobligated Balance:	
d. Total Federal funds authorized	$19,997,901.00
e. Federal share of expenditures	$15,383,491.16
f. Federal share of unliquidated obligations	$1,617,237.84
g. Total Federal share (sum of lines e and f)	$17,000,729.00
h. Unobligated balance of Federal funds (line d minus g)	$2,997,172.00
Recipient Share:	
i. Total recipient share required	$1,007,395.00
j. Recipient share of expenditures	$10,754,515.99
k. Remaining recipient share to be provided (line i minus j)	($9,747,120.99)
Program Income:	
l. Total Federal program income earned	
m. Program income expended in accordance with the deduction alternative	
n. Program income expended in accordance with the addition alternative	
o. Unexpended program income (line l minus line m or line n)	

	a. Type	b. Rate	c. Period From	Period To	d. Base	e. Amount Charged	f. Federal Share
11. Indirect Expense	Provisional	see attached			7,010,907.72	2.562,765.00	2.562,765.00
				g. Totals:			

12. *Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation:*

13. Certification: By signing this report, I certify that it is true, complete, and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent information may subject me to criminal, civil, or administrative penalities. (U.S. Code, Title 218, Section 1001)

a. Typed or Printed Name and Title of Authorized Certifying Official Edward W. Miles, Chief Financial Officer	c. Telephone (Area code, number and extension) 207-622-7566 ext. 296
	d. Email address klaplante@mcd.org
b. Signature of Authorized Certifying Official	e. Date Report Submitted (Month, Day, Year) 10/30/2014
	14. Agency use only:

Standard Form 425
OMB Approval Number: 0348-0061
Expiration Date: 10/31/2011

Paperwork Burden Statement
According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is 0348-0061. Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0061), Washington, DC 20503.